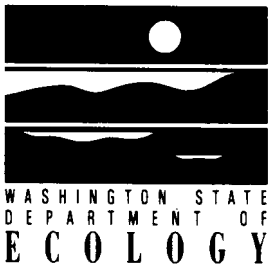


# Environmental Handbook for Washington Construction Contractors:

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## Regulatory Guidance

December 1996
Publication No. 96-503

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# Environmental Handbook for Washington Construction Contractors:

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## Regulatory Guidance

This document was adapted from the original prepared by the River City Resource Group, Inc. of Portland for the Oregon Department of Environmental Quality (DEQ). The Department of Ecology (Ecology), with assistance from several state and local agencies, has adapted the Oregon document to reflect conditions, laws and regulations applicable in Washington. Each chapter was authored by a team from the respective program at Ecology or other agencies. Ecology would like to recognize the contributions of the primary authors:
Carol O'dahl, Editor; Chuck Hinds, Paul Stasch, Steve Hirshey, Rich Hibbard, Jim Wavada, Jim Malm and Bill Zachmann of Ecology, and Mark Soltow of the Department of Labor and Industries. Countless others have contributed by reviewing, processing and assisting in this publication.

Washington Department of Ecology
Solid Waste & Financial Assistance Program

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Department of Ecology
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PO Box 47600
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## NOTICE

The **Environmental Handbook for Washington Construction Contractors: Regulatory Guidance** was adapted from the *Environmental Handbook for **Oregon** Construction Contractors: Regulatory Guidance*, originally prepared by River City Resource Group, Inc. for the Waste Reduction Assistance Program of the Oregon Department of Environmental Quality (DEQ).

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This manual is offered for education and informational purposes. When using this manual, the facts and circumstances should be reviewed by appropriately trained professionals and consultants.

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## List of Tables

# About This Handbook

## I.1 How To Use This Handbook

This Handbook applies to typical building construction and demolition activities in the State of Washington.

The Environmental Handbook for Washington Construction Contractors was developed to help contractors, regulators, and consumers easily identify environmental laws, regulations, and permit requirements associated with typical construction activities. To make this guide more "user-friendly," additional information about construction employee safety and health, contractor liability and consumer issues are included in the appendices.

Not ALL laws, regulations, and/or permit requirements are included. Instead, the handbook includes the most pertinent and generally required information. It is intended as a guidance book and not a strict interpretation of state laws.

The handbook identifies which permits are required for particular projects. Whenever possible, we identify whether permits can be applied for concurrently. Phone numbers are provided for federal, state and local agencies requiring permit applications. In most cases, additional information about the application procedure and schedule is also included. For those of you with additional questions, other relevant phone numbers and references are provided to direct you to additional assistance.

The document is divided into ***chapters*** according to subject matter:

**Chapter 1 Underground Storage Tanks**
**Chapter 2 Water**
**Chapter 3 Air**
**Chapter 4 Solid Waste**
**Chapter 5 Hazardous Waste**
**Chapter 6 Spills**
**Chapter 7 Noise**

**Appendix A Agency Contacts**
**Appendix B Employee Safety & Health**
**Appendix C Contractor Responsibility & Liability**
**Appendix D Consumer Issues**

Each chapter is further divided into ***sections***. At the beginning of each *section* is a list of federal and state laws and regulations that apply to the particular construction activity.

The citations for some of these laws and regulations are abbreviated as follows:

CFR Code of Federal Regulations
RCW Revised Code of Washington
WAC Washington Administrative Code

In each section there is an outline of applicable regulatory requirements, permit procedures, necessary work practices, best management practices, and recommendations and information on how to notify the appropriate environmental authorities.

## I.2 For Additional Information

At the end of each section is a **"Contacts and Sources of Assistance"** list of addresses and phone numbers for resources highlighted in the chapter that can provide more information.

For instance, the Department of Ecology (Ecology) has a new Permit Assistance Center in Olympia which connects you to the answers you need about environmental permits. You can call about new construction, expansion, or major renovations; site searches; project permit coordination; and specific permit activities. Most services are free and are available to businesses, government agency staff, and public interest groups. Other subject-specific handbooks and guides are listed within the chapters in the Contacts and Sources of Assistance sections.

Appendix A lists the phone numbers and addresses for Ecology regional offices and the Permit Assistance Center in Olympia, the Department of Labor and Industry (L & I) Field Offices, and local health departments and moderate risk waste coordinators.

## I.2.1 Contacts and Sources of Assistance

For general information about environmental permits and regulations, contact:

- Department of Ecology
  Permit Assistance Center
  PO Box 47600
  Olympia, WA 98504-47600
  360-407-7037

- Department of Labor and Industries (see Appendix A)

- Local Health Departments (see Appendix A)

# Chapter 1
# Underground Storage Tanks

This chapter applies to contractors who work on or encounter underground storage tanks (UST), or hire subcontractors to work on underground storage tanks which are regulated by the state. There are a number of exemptions, so contact Ecology's regional offices (see Appendix A) if you are uncertain of the status of a particular tank. Sometimes regulatory authority pertaining to tanks overlaps. Therefore, you should always contact local authorities to determine any local regulations or required permits.

Underground storage tanks can pose a significant threat to the environment. Tanks and piping must be properly installed, maintained and tested to prevent leaks and accidents which will affect soil or groundwater. When tanks are decommissioned (permanently removed from service) spills can occur. Decommissioning is also dangerous because of the potential for explosive vapors.

Several federal and state regulations apply to owners of underground storage tanks as well as contractors who service them (service providers). These regulations require certification of supervisors, permitting of tanks, notification of tank decommissioning, prompt notification of spills and specific design standards for new, replacement, or upgrading of tanks. The federal government has given Ecology regulatory oversight authority. All questions, notifications, and applications should be directed to Ecology's Regional Offices (see Appendix A). There are many additional details and requirements for contractors and USTs that can not be included in this general guidance document. If you are uncertain about the status of an UST, contact Ecology. In addition, contractors may discover abandoned tanks unexpectedly in the course of any construction or demolition activity.

By following the procedures, owners and contractors can minimize costly environmental cleanup, protect themselves from third-party damages, and avoid enforcement actions and penalties assessed by Ecology.

## 1.1 Federal and State Regulations

| | |
|---|---|
| **Code of Federal Regulations** | |
| **40 CFR 280** | Federal Underground Storage Tank Rules |
| **Revised Code of Washington (RCW)** | |
| **Chapter 70.105** | Hazardous Waste Management Act |
| **Chapter 70.105D** | Hazardous Waste Cleanup - Model Toxics Control Act (MTCA) |
| **Washington State Administrative Code (WAC)** | |
| **Chapter 173-303** | Dangerous Waste Regulations |
| **Chapter 173-340** | Model Toxics Control Act Cleanup Regulation) |
| **Chapter 173-360** | UST Regulations |

## 1.2 Ecology Licensing Requirements

Only contractors with an UST Certification may work on USTs. Ecology's certification program is being administered by the International Fire Code Institute (IFCI). The purpose of the IFCI Underground Storage Certification Program is to provide a nationally recognized examination and credential by which individuals can demonstrate their knowledge of various regulatory codes, standards and practices pertaining to underground storage tanks. The IFCI UST Certification exams are administered on EXPro, an electronic examination process administered by Assessment Systems, Inc. (ASI). The national exams pertaining to USTs are Installation/Retrofitting, Decommissioning, Tightness Testing, and Cathodic Protection. ASI also administers a state specific exam on Site Assessment. The national exams are valid for a two-year period. To retain your IFCI certification, you must take and pass the exam every two years. The Site Assessment Exam must only be taken and passed once.

Examinations are held in seven cities throughout Washington (see Section 1.6, Contacts and Sources of Information).

## 1.3 Ecology Notification of Tank Services

Ecology requires some tank owners, operators, or service providers to notify the department prior to tank installation or decommissioning. Notification and reporting requirements are summarized below. Contact Ecology for details and to obtain copies of appropriate notification forms (see Appendix A).

**Table 1.1**
**Notification of Tank Services**

| Type of Tank Service | Notification Applies to: | Notification Requirements: |
|---|---|---|
| New tank installation | Any new tank installed, whether or not it replaces an old tank. | * Submit 30-day intent to install form (ECY020-95) prior to beginning work<br>* Submit UST addendum to the Department of Licensing<br>* Contact the local fire dept. & health dept. |
| Tank retrofit | | * Submit checklist of retrofit or tank addendum form<br>* Contact local fire department<br>* In any instance where repairs are necessary on UST systems to correct a structural defect the system must be up-graded to meet 1998 standards. |
| Decommissioning | Tanks removed from ground or filled with an inert solid material.<br><br>A site assessment (WAC 173-360-390) is required before the closure or change in service is completed. | * Submit notice of intent to close 30 days prior to work<br>* Submit closure & Site Assessment Notice (Form ECY 020-94) within 30 days after decommissioning is complete<br>* Contact the local fire department or planning or building department for necessary permits<br>* Submit Check/Site Assessment Checklist (Form ECY010-158) |

## 1.4 Ecology Contamination Reporting Requirements

Ecology requires that tank owners or operators and contractors promptly report any contamination or spills. Follow the guidelines below.

**Reporting Contamination**

Owners and operators of UST systems shall report ***suspected releases*** to Ecology or delegated agency within 24 hours, or another reasonable time period specified by Ecology or delegated agency, and follow the procedures in WAC 173-360-360. Contractors must also report releases immediately to the owner or operator, and to Ecology within 72 hours of their discovery. If the owner or operator are not immediately available the report should be made directly to Ecology.

If a spill has contaminated a stream, lake, storm sewer, well, or groundwater, report it immediately to the State Emergency Management Division at 800-258-5990.

## 1.5 Worker Protection Requirements for UST Removal

Tank removal work, such as excavation, welding and chemical exposure, presents a number of safety and health hazards. These must be addressed through the employer's Accident and Illness Program and Chemical Hazard Communication Program. Please see Appendix B, Employee Safety & Health, for more details.

In addition, where the tank removal site is "recognized" by the Department of Ecology, the Hazardous Waste Operation and Emergency Response (HAZWOPER) [WAC 296-62-300 through 3190] standard would apply. When sampling results confirm the presence of a hazardous waste on a site, or the site is listed on the Leaking Underground Storage Tank site list (LUST list), L & I considers the site a recognized Hazardous Waste Operations site. This can occur retroactively.

For example, if a tank is removed and it is not obvious at the time that hazardous waste contamination exists in the soil, L & I may later determine that HAZWOPER training was required of contractors if sample results confirm that hazardous waste was present at the time the crew was working on the site. L & I can issue penalties to the contractors who did not have the required training, although at the time of the work the site was not listed on the LUST list, or known to have hazardous waste on site. The only way to avoid this situation is to have all workers trained in advance and assume the site is hazardous until proven otherwise.

These requirements include:

- Site specific safety & health plan
- Exposure monitoring
- Respirators and protective clothing
- Site control
- 40- or 80-hour site worker training
- Medical surveillance

## 1.6 Contacts and Sources of Assistance

To make reservations for IFCI UST examination, contact:

- International Fire Code Institute
  5360 Workman Mill Road
  Whittier, CA 90601

310-699-0124

For more information or copies of the worker protection standards, contact

- L & I (see Appendix A)

# Chapter 2 Water

## Water Quality; Wetlands, Shorelands & Floodplains; & Water Rights

This chapter outlines the major water and land use regulations that apply to construction and demolition activities in the State of Washington. Both the contractor and the land owner are responsible and liable for maintaining water quality standards even if a particular project does not require a local, state or federal permit. To avoid water pollution problems, check with water quality authorities for information before beginning construction. This chapter includes contact information for a variety of construction activities affecting water quality.

Since construction activities can adversely impact surface and groundwater quality, federal, state and local agencies have instituted regulations to protect sensitive water resources. This chapter also identifies specific federal, state and local regulations which affect construction activities located in or near wetlands, shorelands and floodplains.

Finally, withdrawal of water can impact existing water rights. This activity is regulated by the state. This chapter also describes the necessary actions and procedures for obtaining water right permits.

Construction activities can impact water by affecting water quality and supply. Sewer hookups and the installation and maintenance of septic systems and drainfields can, for instance, introduce pollutants into state waters. In addition, construction of buildings and roads often involves the use of hazardous materials that can infiltrate into groundwater or run off the construction site to surface waters. Grading and other land disturbances contribute to erosion, accelerating the sedimentation of streams, lakes and wetlands. Dredging and filling of surface waters also can impact water quality. These activities can result in sediments and toxic pollutants which degrade wildlife habitat and injure or kill aquatic life, including endangered salmon.

However, pollution from these activities can be reduced or eliminated with appropriate controls. State and local water authorities can suggest ways to control and reduce pollution of streams, rivers, lakes, wetlands, marine waters, groundwaters and other waters of the state.

# Water Quality

## 2.1 On-Site Sewage Disposal (Discharge of Wastewater to a Septic Tank)

This section applies to contractors constructing and hooking up subsurface sanitary sewage systems, such as septic tanks and drainfields.

### 2.1.1 Applicable State Laws and Regulations

| | |
|---|---|
| **Revised Code of Washington (RCW)** | |
| **Chapter 90.48** | Water Pollution Control, requiring "...the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the State of Washington." |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-200** | Water Quality Standards for Ground Waters of the State. |
| **Chapter 173-216** | State Waste Discharge Permit Program, applies to the discharge of wastewaters from industrial, commercial and municipal operations into ground and surface waters of the state and into municipal sewerage systems. |
| **Chapter 173-218** | Underground Injection Control Program, prohibiting the discharge of wastewaters into wells. |
| **Chapter 173-240** | Submission of Plans and Reports for Construction of Wastewater Facilities, requiring that engineering reports and plans and specifications for the project be submitted to Ecology for approval. |

Businesses and residences that locate outside areas served by municipal sewer systems often use septic tanks and subsurface drainfields to treat and dispose of sanitary sewage. Plans for these systems are reviewed and approved by local health departments, the State Department of Health (State Health) or the Department of Ecology (Ecology), depending on the size and nature of the system.

Local health departments (see Appendix A) issue permits for on-site sewage disposal systems with design flows, at any common point, that are less than 3,500 gallons per day.

State Health reviews and approves plans and specifications for on-site sewage systems with design flows, at any common point, between 3,500 gallons per day and 14,500 gallons per day. Local health departments can assume this responsibility through a contractual agreement with State Health.

State Health also reviews comprehensive sewer plans and some proposals for land application of municipal wastewater. Local health departments are responsible for reviewing and approving biosolids utilization projects. To be applied to the land, biosolids must meet Ecology and United States Environmental Protection Agency (EPA) biosolids quality standards.

Ecology reviews plans and specifications and issues State Waste Discharge Permits for on-site domestic waste systems exceeding 14,500 gallons per day, all systems receiving state or federal construction grants under the Clean Water Act, and systems using mechanical treatment or lagoons with design flows above 3,500 gallons per day.

In areas where industrial and commercial operations intend to use on-site systems for the treatment and disposal of process wastewater (as opposed to domestic sanitary sewage), Ecology is the responsible agency for permitting this discharge. Ecology will not approve a discharge if it will differ substantially from domestic waste water and discharge is planned to subsurface drainfield. A State Waste Discharge Permit will likely be required for a discharge to groundwater from an industrial/commercial facility to an on-site system.

### 2.1.2 Contacts and Sources of Assistance

Table 2.1 summarizes agency authority for specific projects based on amount of water involved.

**Table 2.1. On-site Sewer System Jurisdiction**

| | |
|---|---|
| Septic systems with design flows less than 3,500 gallons per day | Local Health Department/District (see Appendix A) |
| Septic systems with design flows between 3,500 and 14,500 gallons per day | State Department of HealthCall in Spokane for all counties: 509-456-2754 or 509-456-6177 |
| Septic systems with design flows greater than 14,500 gallons per day. | Department of Ecology(see Appendix A) |
| Mechanical on site treatment systems | Department of Ecology(see Appendix A) |
| Industrial and commercial on site systems | Department of Ecology(see Appendix A) |

## 2.2 Off-site Sewage Disposal (Discharge of Wastewater to a Municipal Sewage Treatment Plant)

This section applies to contractors who construct drainage and sewer lines that hook up to municipal sewage systems.

Local county and city governments are also responsible for regulating development. Building permits are generally required to construct permanent buildings or additions to existing facilities. The application requires detailed plans for the structures including sanitary sewer hookups. The local sewer authority is included in the review of the application to ensure the project will comply with the local sewer ordinance and protect the publicly-owned treatment works. Permits are issued upon approval of the plans. Contact the planning department in your municipality for more information.

### 2.2.1 Contacts and Sources of Assistance

- Local Health Departments/Districts (see Appendix A.)
- Ecology Regional Offices/Headquarters (see Appendix A.)

## 2.3 Soil Erosion and Sediment Control (Stormwater Management)

Stormwater runoff from construction sites can cause significant water quality problems. Grading removes grasses, rocks and other protective ground covers exposing underlying soils. Exposed soils are available to be washed into nearby streams when it rains. The total volume and flow rate of stormwater from a site under construction can be much greater than what occurred before the site was disturbed. This can cause stream bank erosion and streambed scouring.

Besides eroded soils, construction wastes can foul streambeds and lakes. Fuel oil, grease, sealants, paints and other toxic materials can run off the construction site and wash into surface waters, killing fish and other aquatic life.

## 2.3.1 Federal and State Stormwater Regulations

This section applies to contractors who will physically disturb five or more acres of land by clearing, grading, excavating or other construction activities.

| | |
|---|---|
| **Federal Clean Water Act** | |
| **Code of Federal Regulations** | |
| **40 CFR 122-124** | Federal statute and regulations requiring a National Pollutant Discharge Elimination System (NPDES) permit for construction activities that disturb five (5) or more acres of land. |
| **40 CFR 131** | Federal Water Quality Standards |
| **Revised Code of Washington (RCW)** | |
| **Chapter 90.48** | Water Pollution Control, requiring "... the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the State of Washington." |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-201A** | Water Quality Standards for Surface Waters of the State. Short-term Modification of Water Quality Criteria (Water Quality Modification), applies when activities will unavoidably violate state water quality standards on a short-term basis. |
| **Chapter 173-204** | Sediment Management Standards. |
| **Chapter 173-220** | National Pollution Discharge Elimination System (NPDES) Program, applies to the discharge of wastewaters to the surface waters of the state, operating under state law as a part of the NPDES Program created by section 402 of the Federal Clean Water Act (CWA). |
| **Chapter 173-240** | Submission of Plans and Reports for Construction of Wastewater Facilities, requiring that engineering reports and plans and specifications for the project be submitted to Ecology for approval. |

Note: Contact local authorities for additional requirements and regulations.

In accordance with EPA requirements, Ecology has issued a National Pollutant Discharge Elimination System (NPDES) stormwater general permit to help reduce the incidence of construction-related stormwater impacts. A general permit is a non-site-specific permit issued for a class or category of dischargers. (In addition to stormwater, there are dairy, ship yard, sand and gravel, and upland hatchery general permits.) The permit requires owners to prepare and implement temporary erosion and sediment control measures to control runoff during construction.

Owners of any construction site must apply for coverage under the stormwater general permit if:

(1) Five or more acres of land are disturbed and;

(2) Stormwater from the construction activity can reach surface water or storm sewers.

A stormwater permit is not required when less than five acres of total land area will be disturbed. However, if the construction is part of a larger development plan where multiple distinct construction activities may be taking place on different schedules under one comprehensive plan, then the total area that will be disturbed must be considered.

If, for example, the total land area to be disturbed in a phased construction of a subdivision exceeds 7.5 acres, Ecology's stormwater permit must be obtained prior to beginning landclearing during the first phase. The five-acre threshold applies only to land disturbed by the land owner or his/her representative. Land to be disturbed by independent contractors who purchase lots from the owner should not be considered in the total acreage unless the individual lots are disturbed prior to being sold.

Sites under five acres are still expected to implement erosion and sediment control measures as necessary to protect water quality adjacent to the disturbed area.

Owners of construction sites who will discharge all stormwater associated with construction activities to the ground (e.g., infiltration basins) are not required to apply for coverage under Ecology's stormwater general permit, because the stormwater won't be going to surface water or storm sewers. However, owners of such sites are responsible for complying with the ground water quality standards. Therefore, they should take reasonable measures to reduce the potential for ground water pollution.

### 2.3.2 Contacts and Sources of Assistance

For information on how to apply for coverage under the general permit, contact:

- Department of Ecology
  Water Quality Program
  Industrial Stormwater Unit
  P.O. Box 47696
  Olympia, Washington 98504-7696
  360-407-7156

- Ecology Regional Offices (see Appendix A)

For information on best management practices for stormwater control, contact:

- Ecology Regional Offices (see Appendix A) or
  Headquarters, Water Division call 360-407-6600.
  There may be a nominal charge to cover the production costs of the document.

  *Stormwater Management Manual for the Puget Sound Basin*, (The Technical Manual) Publication No. 91-75. This guidance applies statewide.

- Associated General Contractors of Washington
  1200 Westlake Avenue N, Suite 301
  Seattle, Washington 98109
  800-562-2868

  *Waste Disposal and Erosion/Sediment Control Methods*, Associated General Contractors of Washington, September 1988. An AGC Water Quality Manual.

## 2.4 Discharge of Construction Washwater

This section applies to contractors who directly or indirectly discharge washwaters to waters of the state, including to storm drains or to the ground. Discharges can be generated during vehicle and equipment washing, acid washing of concrete and masonry, painting, fueling, rinsing of concrete trucks and hydraulic street sweepings. Vehicle and equipment washing and rinsing of concrete trucks, in particular, are significant sources of washwaters.

## 2.4.1 Applicable Federal and State Laws and Regulations

| | |
|---|---|
| **Code of Federal Regulations** | |
| **40 CFR 122-124** | Federal regulations requiring NPDES permits |
| **40 CFR 131** | Federal water quality standards |
| **Revised Code of Washington (RCW)** | |
| **Chapter 90.48** | Water Pollution Control, requiring "...the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the State of Washington." |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-200** | Water Quality Standards for Ground Waters of the State. |
| **Chapter 173-201A** | Water Quality Standards for Surface Waters of the State. Short-term Modification of Water Quality Criteria (Water Quality Modification), applies when activities will unavoidably violate state water quality standards on a short-term basis. |
| **Chapter 173-216** | State Waste Discharge Permit Program, applies to the discharge of wastewaters from industrial, commercial and municipal operations into ground and surface waters of the state and into municipal sewerage systems. |
| **Chapter 173-218** | Underground Injection Control Program, prohibiting the discharge of wastewaters into wells. |
| **Chapter 173-220** | National Pollution Discharge Elimination System (NPDES) Program, applies to the discharge of wastewaters to the surface waters of the state, operating under state law as a part of the NPDES Program created by section 402 of the Federal Clean Water Act (CWA). |
| **Chapter 173-240** | Submission of Plans and Reports for Construction of Wastewater Facilities, requiring that engineering reports and plans and specifications for the project be submitted to Ecology for approval. |

There are a number of environmental concerns with pollutants in construction washwaters. Potential pollutants in these discharges include oils, detergents, paints and corrosives. In particular, washwater from vehicle and equipment cleaning activities may contain oil and grease, suspended solids, heavy metals, and organic pollutants. Even at low concentrations, these pollutants can be toxic and harmful to living organisms including fish and people who eat the fish.

The preferred option for the management of vehicle and equipment washwater is a zero discharge, or closed-loop water recycling system. The least desirable option would be a discharge to surface water which would require a full NPDES permit - a costly and time consuming proposition. Other options, such as connection to sanitary sewer are provided in Ecology's publication, *Vehicle and Equipment Washwater Discharges*, (see

Section 2.4.2). You can avoid the permit requirements by preventing your wastes from entering any body of water.

Note: Contact local authorities for additional requirements or regulations.

### 2.4.2 Contacts and Sources of Information

For information on best management practices and management options for vehicle washwater, contact:

- Washington State Department of Ecology
  Water Quality Program
  Permit Management Section
  P.O. Box 47600
  Olympia, Washington 98504-7600
  360-407-6439

  *Vehicle and Equipment Washwater Discharges*, Publication No. WQ-R9556.

## 2.5 Concrete Truck Rinsing

### 2.5.1 Applicable Federal and State Laws and Regulations

| | |
|---|---|
| **Code of Federal Regulations** | |
| **40 CFR 122-124** | Federal regulations requiring NPDES permits |
| **40 CFR 131** | Federal water quality standards |
| **Revised Code of Washington (RCW)** | |
| **Chapter 90.48** | Water Pollution Control |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-200** | Water Quality Standards for Ground Waters of the State. |
| **Chapter 173-201A** | Water Quality Standards for Surface Waters of the State. |
| **Chapter 173-216** | State Waste Discharge Permit Program. |
| **Chapter 173-218** | Underground Injection Control Program |
| **Chapter 173-220** | National Pollution Discharge Elimination System (NPDES) |
| **Chapter 173-240** | Submission of Plans and Reports for Construction of Wastewater Facilities |

Washwater from the rinsing of concrete trucks can sometimes be designated as a hazardous waste for corrosivity if it has a high pH. Residue in washwaters can also

harden into a pavement-like consistency in areas which may require revegetation. Washwater from concrete trucks should be disposed of into:

(1) An area where the concrete wash can harden, be broken up and then placed in a dumpster for reuse, recycling or disposal.

(2) A designated area which will later be backfilled (a slurry pit).

(3) A location which is not subject to surface water runoff; and is more than 50 feet away from a storm drain, open ditch or receiving water.

*Never dump washwater into a sanitary or storm sewer, or in an area where it can reach surface waters. With local sewer district approval, discharging washwater to the sanitary sewer may be an option.*

### 2.5.2 Contacts and Sources of Information

- Ecology Regional Offices (see Appendix A.1)

Note: Contact local authorities for additional requirements or regulations

## 2.6 Construction Activities in Waterways

This section applies to contractors who dredge, excavate, fill, drain, alter or conduct construction activities in any waters of the state, including wetlands.

The following federal and state regulations apply to marine and estuarine environments, lakes, rivers, streams, ponds, overflow channels and wetlands. These regulations control a number of construction activities when they occur in waters of the state. These activities include:

- the dredging and placement of fill,
- alteration of stream banks (including the placement of rip rap),
- ditching and draining,
- in-water construction (such as pile driving and bridging); and
- construction of structures in navigable waters.

Depending on this size of the project, you may be covered under the Nationwide Permit (see Section 2.6.4); check with Ecology and the Permit Assistance Center (see Section 2.6.6). In addition, please note that you can apply for multiple permits under the Joint Aquatic Resources Permit (JARPA) (see Section 2.11 for details).

## 2.6.1 Federal, State and Local Laws and Regulations

**Federal Clean Water Act Sections 404 and 401**
Federal regulations requiring a Section 404 permit for the discharge of dredged or fill material into waters of the United States. Administered by the US Army Corps of Engineers

**Code of Federal Regulations**

| | |
|---|---|
| **33 CFR 320-330** | Federal law requiring permits or licenses to comply with state water quality standards. |
| **40 CFR 131** | Federal water quality standards. |

**Section 10 of the Rivers and Harbors Act**
Federal law regulating activities affecting navigable waters. Administered by the US Army Corps of Engineers

**Federal Coastal Zone Management Act**
Federal law requiring state management of coastal areas. Administered by the Department of Ecology.

1987 US Army Corps of Engineers (and EPA adopted) Guidelines for wetlands delineation.

**Revised Code of Washington (RCW)**

| | |
|---|---|
| **Chapter 90.58** | Shoreline Management Act |
| **Chapter 90.48** | State Water Pollution Control Act |
| **Chapter 86.12, 16, 26** | Floodplain Management Program - Local Flood Damage Reduction Ordinance as per FEMA National Flood Insurance Program requirements. |
| **Chapter 75.20** | Construction Projects in State Waters, enabling statute to protect all fish life through the development of a state-wide system of rules. |

**Washington Administrative Code (WAC)**

| | |
|---|---|
| **Chapter 173-201A** | Water Quality Modification |
| **Chapter 220-110** | Hydraulic Code Rules, regulating the construction of hydraulic projects or other work that will use, divert, obstruct or change the natural flow of or bed of waters of the state through the issuance of a Hydraulic Project Approval (HPA). Administered by Department of Fish and Wildlife. |
| **Chapter 173-19** | Local Shoreline Master Program. Administered by local government. |
| **Chapter 173-14** | Shoreline Permits |

**Local Ordinances for Wetland Protection**

## 2.6.2 State Surface Water Quality Criteria

Any construction activity in or adjacent to surface waters that will unavoidably cause violations of the State of Washington's Surface Water Quality Criteria requires a Short-term Water Quality Modification. For information, contact the Water Quality Program at Ecology's Regional Offices.

## 2.6.3 Federal Section 401 Certification

Any federal permit or license that involves construction activities affecting state waters also requires a Section 401 Certification from Ecology. The purpose is to certify compliance with state water quality standards. The 401 Certification is required before you can obtain your Section 404 Permit from the US Army Corps of Engineers. However, you can apply for both simultaneously.

Remember that you can apply for multiple permits simultaneously through the Joint Aquatic Resources Permit Application (JARPA) (see Section 2.11 for details).

## 2.6.4 Federal Section 404 Permit

Filling or construction that occurs in waters of the United States also requires a Section 404 Permit from the US Army Corps of Engineers. The permit is required prior to the initiation of construction activities. There are several types of 404 Permits issued depending on the scope of the project. Here is a brief description:

**Nationwide Permit**

- Projects with few impacts may qualify for coverage under a Nationwide Permit (similar to the state's general stormwater permit).
- The US Army Corps of Engineers must verify that the project complies with the Nationwide Permit requirements.

Examples of projects that could fall under the Nationwide Permit include minor rip rap along stream banks for erosion protection and utility line crossings under and road crossings over small streams.

**Regional Permit**

- Regional Permits are similar to Nationwide Permits. They cover categories of activities that have been regionally authorized.

**Letter Permit**

- A Letter Permit is required for minor work on navigable waterways, such as driving pilings for private moorage.

**Individual Permit**

- Larger projects with greater potential impact require an Individual Permit. (Check with the US Army Corps of Engineers to determine if your project qualifies for an Individual Permit.)
- As part of its permit evaluation, the US Army Corps of Engineers will look for efforts to avoid, minimize and mitigate impacts (in that order). Mitigation is particularly important in wetlands development. Projects should not result in any net loss of wetland functional value. The US Army Corps of Engineers is in the process of preparing mitigation guidelines for applicants.
- The US Army Corps of Engineers will issue a public notice soliciting comments on the project. The public notice period is 30 days. Public comment will be factored in to the evaluation of the application.
- As part of the evaluation, the US Army Corps of Engineers will analyze impacts on archeological resources, historic properties and endangered species.

## 2.6.5 Hydraulic Project Approval

Any project that uses, diverts, obstructs or changes the natural flow or bed of any waters of the state requires a hydraulic project approval (HPA) from the Washington State Department of Fish and Wildlife. Applications for an HPA must include general plans for the overall project and complete plans and specifications of the proposed work within the high water mark in fresh or saltwater. They must also provide complete plans for the protection of fisheries and wildlife resources. An HPA may provide a restrictive window for in-water work in order to protect migrating salmon or spawning shellfish.

## 2.6.6 Contacts and Sources of Information

- US Army Corps of Engineers
  P.O. Box C-3755
  4735 E. Marginal Way S
  Seattle, WA 98124-2255
  Regulatory Branch
  206-764-3495.

- Ecology Regional Offices (see Appendix A.1)

For further information on the Hydraulic Project Approval process contact:

- Washington Department of Fish and Wildlife
  Habitat Program
  600 Capital Way North
  Olympia, Washington 98501-1091
  360-902-2530

Although there are a large number of regulations and associated permits you can apply for some permits simultaneously by using a joint application. For more information on the joint permitting process contact:

- Washington Department of Ecology
  Permit Assistance Center
  P.O. Box 47600
  Olympia, Washington 98504-47600
  360-407-7037

  *Permit Handbook, Commonly Required Environmental Permits for Washington State* Publication No. 90-29, Ecology, November 1994.

# Wetlands, Shorelands & Floodplains

## 2.7 Wetlands

This section applies to contractors working within or adjacent to regulated wetlands or their buffers - transitional lands between open water and uplands, or areas that periodically saturate.

If you anticipate working in lands that are transitional between open water and uplands or that may be periodically saturated, you may be dealing with wetlands. Wetlands provide essential cover, feeding, nesting, and breeding habitat for many species of fish and wildlife. Numerous federal, state, and local laws affect the use and protection of wetlands.

Many of these requirements, outlined below, are mentioned elsewhere in this handbook, but because they may not focus on the regulation of wetlands as their primary purpose, it may not be clear to you that they apply to activities within wetlands. These regulations and their applicability to specific wetlands are thoroughly discussed in Ecology's *Wetland Regulations Guidebook* (see section 2.7.2 for information). This guidebook also provides information on other wetland regulations that may not apply specifically to construction activities. We recommend that you obtain a free copy to help you determine the appropriate agency with jurisdiction for a particular wetland area. Please note that case-by-case review is needed and you are advised to contact the appropriate agency before beginning your project.

## 2.7.1 Applicable Federal, State and Local Wetlands Regulations

**Federal Clean Water Act Sections 401 and 404**

**Section 10 of the Rivers and Harbors Act** (federal permits section)
Federal law regulating activities affecting navigable waters. Administered by the US Army Corps of Engineers

**National Environmental Policy Act** (NEPA section)

**Federal Coastal Zone Management Act** (aquatic resources section)
Federal law requiring state management of coastal areas. Administered by the Department of Ecology.

**Revised Code of Washington (RCW)**

| | |
|---|---|
| **Chapter 90.58** | Shoreline Management Act |
| **Chapter 90.48** | State Water Pollution Control Act |
| **Chapter 75.20.100-160** | Hydraulic Project Code (aquatic resources section) |
| **Chapter 86.12, 16, 26** | Floodplain Management Act (local section). |
| **Chapter 43.21C** | State Environmental Policy Act (SEPA/NEPA section) |

**Local Regulations**

Many local jurisdictions also have laws that affect projects in or adjacent to wetlands. The most common means of regulating development in wetland areas is the local Shoreline Master Program (local section) and the critical areas ordinance developed pursuant to the State Growth Management Act. Because there are considerable variations in local regulations, you need to contact the local planning departments to determine how these regulations may affect a particular wetland. In many cases, local regulations protect wetlands not covered by federal and state regulations and may be more restrictive than federal and state regulations.

### 2.7.2 Contacts and Sources of Assistance

- Local Planning or Permit Assistance Departments

- Ecology Regional Offices (see Appendix A) Ask for the wetland specialist assigned to your area.

- Department of Ecology
  Publications Distribution Office
  P.O. Box 47600
  Olympia, WA 98504
  360-407-7472

  *Wetlands Regulation Guidebook*. Publication No. 88.05, Ecology, Revised December 1994.

- Department of Fish and Wildlife
  Habitat Management Division
  P.O. Box 43155
  Olympia, WA 98504-3155
  360-902-2534

For information on federal regulations contact:

- US Army Corps of Engineers
  P.O. Box C-3755
  4735 E. Marginal Way S
  Seattle, WA 98124-2255
  Regulatory Branch
  206-764-3495

## 2.8 Shoreline Management Act Permits (Shoreline Permit)

### 2.8.1 Applicable State Law

**Revised Code of Washington (RCW)**
**Chapter 90.58 Shoreline Management Act**

The Shoreline Management Act of 1971 (SMA) is administered at the local level. The SMA requires localities with designated shorelines to develop a Shoreline Master

Program. The program requires a Substantial Development permit for any development or construction activity valued at $2,500 or more and located on the water or shoreline. This requirement applies to any use or activity that materially interferes with the normal public use of the water or shorelines of the state, for any activity listed as a conditional use in the local Shoreline Master Program, and for any activity that requires a variance from the provisions of the local Shoreline Master Program.

Shorelines means lakes, including reservoirs with 20 or more surface acres; streams where the mean annual flow is 20 cubic feet per second or greater; marine waters, plus an area landward for 200 feet measured on a horizontal plane from the ordinary high water mark; and all associated marshes, bogs, swamps, and river deltas. Floodplains and floodways incorporated into local shoreline master programs are also included.

To apply for a permit, you should contact the local planning department and ask to speak to the Shoreline Administrator. The procedure for obtaining this permit varies as does processing time. Generally, a public hearing is required. The local official will require:

- an affidavit of public notice;
- a location map;
- a topographic map; and
- a site map.

If a shoreline variance or conditional use permit is required, the Department of Ecology must give its approval.

## 2.8.2 Contacts and Sources of Assistance

- Local Planning Departments

- Ecology Regional Offices (see Appendix A)
  Ecology maintains a list of Shoreline Administrators for all communities and counties with Shoreline jurisdictions.

# 2.9 Floodplain Development Permit

## 2.9.1 Applicable Federal and State Laws

**Federal Emergency Management Act**
Established National Flood Insurance Program requiring local governments to develop local Flood Damage Reduction Ordinances.

**Revised Code of Washington (RCW)**
**Chapter 86.12, 16, 26** Floodplain Management Act (local section).

**Permit Procedures**

Local governments participating in the National Flood Insurance Program (NFIP), are required to review proposed construction projects to determine if they are in identified floodplains as shown on the NFIP maps. If a project is located in a mapped floodplain, the local government requires that a development meet the requirements of the local Flood Damage Reduction Ordinance. These conditions should be included as part of the general building permit process. Generally the Building Inspector or Public Works director is responsible for this program.

Projects are reviewed and conditions imposed on any permits issued to reduce the potential for damage from floodwaters. Permits are required for structures as well as for filling or grading activities in the floodplain. Permit processing time varies by jurisdiction and project complexity. Though a public hearing is not normally required, there are exceptions.

State law requires that local entities have a local floodplain ordinance that meets or exceeds NFIP requirements. Ecology has approval authority over these ordinances.

## 2.9.2 Contact and Sources of Assistance

For permit applications or additional information, contact:

- City or county building, public works or planning department.

# Water Rights

## 2.10 Water Right Permit

This section applies to anyone intending to withdraw water from surface or groundwater sources. Generally, water right permits are issued to the property owner and are appurtenant to a specific property. For storing water, a reservoir permit is required. This section also applies to contractors constructing wells. If your project involves one of these actions, check with the property owner to assure that the proper permits have been obtained.

### 2.10.1 Permit Procedure

A water right is a legal authorization to use a certain amount of public water for specific beneficial purposes. Washington State law requires certain users of public water to receive approval from the state prior to actual use of the water. Approval is granted in the form of a water right permit or certificate. In addition to state-authorized water rights, Washington recognizes valid water claims and federal reserved water rights. A water right is necessary if you plan to divert any amount of water for any use from surface water (water located above ground). Water rights are also required if you plan to withdraw more than 5,000 gallons per day of groundwater or plan to irrigate more than a half acre of lawn or noncommercial garden.

Information required for a water right permit application includes:

- the source of the water supply;
- the nature and amount of proposed use,
- how the water will be used;
- the exact location of the point of diversion or withdrawal;
- a legal description of the property on which the water is to be used;
- the signature of the legal landowner;
- a description of the proposed water system;
- a map showing source of supply, point of diversion, tie to a legal land corner; and
- general plan of proposed developments, date construction will be complete, and the date of complete application of water to beneficial use.

Application for a water right must be made on a form provided by Ecology. Public notice is required. Processing of a water right takes a minimum of 18 months.

Ecology must also review and approve proposed changes to existing water rights to change the place of use, purpose of use, or point of withdrawal.

## 2.10.2 Water Well Construction and Operator's License

This section applies to any one proposing to drill a well. If you own the property and are drilling the well personally, you do not need a license (one well per person for every two years). All other well construction has to be performed by a licensed contractor.

| **Washington Administrative Code (WAC)** | |
|---|---|
| **Chapter 173-160** | Minimum Standards for Construction and Maintenance of Wells |
| **Chapter 173-162** | Regulation and Licensing of Well Contractors and Operators |

This license authorizes a person to engage in the commercial construction of water wells, dewatering systems, monitoring wells, resource protection wells and the decommissioning of existing wells. To qualify for a construction operator license, the applicant must have at least two years of experience with a licensed well driller (or qualifying experience), and pass a written examination administered by Ecology.

All water wells, monitoring wells, resource protection wells and dewatering systems constructed in the state must meet the minimum standards for construction and maintenance of wells as outlined in Chapter 173-160 WAC. At least 72 hours prior to well construction, the contractor or owner must file a Notice to Construct with Ecology and pay the appropriate fee. Fees are based on the type, size, or depth of the well. Wells larger than or equal to 12 inches in diameter are $200.00, wells less than 12 inches are $100.00, resource protection/monitoring wells are $40.00 per well, dewatering systems are $40.00 per 200 lineal feet, and there is no fee for decommissioning a well. A Well Construction Report must be filed upon completion of construction or decommissioning.

## 2.10.3 Dam Safety Approval

Any person intending to construct, modify, or repair any dam or controlling works for the storage of water shall, before beginning construction, submit plans and specifications to Ecology. Plans and specifications must be prepared by a qualified professional engineer and carry the engineer's signature and seal. Plan approval is required before construction begins. Processing time averages about 6 to 8 weeks, but varies depending on project complexity. There is no requirement for a public hearing. A dam that is to be used for flood control purposes, and to effectively remove property from flood hazard designation, must be certified by the Army Corps of Engineers.

Ecology is required to periodically inspect all dams in order to reasonably assure safety to life and property.

## 2.10.4 Reservoir Permit

A reservoir permit is required before constructing any barrier across a stream, channel, or water course if the barrier will create a reservoir. A reservoir is defined as a dam or dike that will store water to a depth of 10 or more feet at its deepest point, or one that will retain 10 or more acre-feet of water. Reservoir-permit applications require information on the use and capacity of the reservoir, and a legal description of the location of the structure. Processing time varies depending on project complexity with a minimum of 18 months. Public notice is required for reservoir permits.

Unless otherwise specified, a reservoir permit will allow the permittee to fill the reservoir once annually. The permit shall specifically state the period during which the reservoir may be filled. Any entity proposing to use water stored in a reservoir must file for a secondary permit. The secondary permit shall refer to the reservoir as its source of water and is obtained in the same manner as a water right.

A lease may be required from the Department of Natural Resources if the dam or reservoir covers state-owned beds of navigable waters (below the line of ordinary high water, which is the line of vegetation around most lakes, streams, and rivers).

If you plan to construct a dam or other obstruction across or in a stream you must receive an HPA from the Department of Fish and Wildlife (see Section 2.10.6).

## 2.10.5 Fish Screen Requirements

Any water-diversion device must be equipped with a fish screen to prevent fish from entering the diversion device. The fish screen must be in place and properly functioning at all times when water is being taken into the diversion. Any device placed in a stream requires an HPA from the Department of Fish and Wildlife (see Section 2.10.6)

## 2.10.6 Contacts and Sources of Assistance for Water Rights

| |
|---|
| For information on water well construction and operator's license or how to file a Notice to Construct or Well Construction Reports, contact: |

- Ecology Regional Offices (see Appendix A.1)

For information on Dam Safety contact:

- US Army Corps of Engineers
  P.O. Box C-3755
  4735 E. Marginal Way S
  Seattle, WA 98124-2255
  Regulatory Branch
  206-764-3495.

For information on Hydraulic Project Approval contact the Department of Fish and Wildlife:

- Department of Fish and Wildlife
  Habitat Management Program
  P.O. Box 43155
  Olympia, WA 98504-3155
  360-902-2534
  or contact the Regional Offices (see local phone book)

For information on state-owned beds of navigable waters, contact:

- Department of Natural Resources
  Aquatic Resources Division
  P.O. Box 47027
  Olympia, WA 98504-7027
  360-902-1100

## 2.11 Contacts and Sources of Assistance for Water

For information on the Joint Aquatic Resource Permit Application (JARPA), contact:

- Ecology
  Permit Assistance Center
  P.O. Box 47600
  Olympia, Washington 98504-47600
  360-407-7037

  The JARPA only applies to aquatic resources and allows contractors to apply for the following permits simultaneously:
  - ❖ 401 Water Quality Certification (see Sections 2.6.3 and 2.7)
  - ❖ Short-term Water Quality Modification (see Section 2.6.2)
  - ❖ Section 404 Permit (see Sections 2.6.4 and 2.7)
  - ❖ Section 10 of Rivers and Harbors Act Permit (see Sections 2.6 and 2.7)
  - ❖ Shoreline Substantial Development (see Section 2.8)
  - ❖ Conditional Use (see Section 2.8)
  - ❖ Variance Permit or exemption (see Section 2.8)
  - ❖ Floodplain Management (see Sections 2.6, 2.7 and 2.9 ) and
  - ❖ Hydraulic Project Approvals (see Sections 2.6.5 and 2.6.6)

- Local Health Departments (see Appendix A)

- Department of Health (see Section 2.1.2)

- Ecology Regional Offices/Headquarters (see Appendix A)
  Industrial Stormwater Unit (see Section 2.3.2)
  Permit Assistance Center (see above)
  Permit Management Section (see Section 2.4.2)
  Publications Office (see Section 2.7.2)

- Department of Fish and Wildlife (see Sections 2.6.6 and 2.7.2)

- Department of Natural Resources (see Section 2.10.6)

- US Army Corps of Engineers (see Sections 2.6.6, 2.7.2 and 2.10.6)

- Associated General Contractors (see Section 2.3.2)

# Chapter 3 Air

This chapter applies to ***all construction and demolition activities that have the potential to create air pollution problems***.

Construction and demolition activities can harm air quality by increasing the ambient concentrations of regulated pollutants. This chapter outlines federal and state regulations related to:

- building materials containing asbestos,
- dust control,
- open burning, and
- woodstoves.

This chapter also includes information about local conditions and authorities contractors should be familiar with.

## 3.1 Asbestos

This section applies to contractors involved in demolition, renovation, repair, construction or maintenance of buildings.

Asbestos can cause environmental health problems. It was used in many construction materials because of its excellent insulation, fire proofing and sound proofing qualities. However, asbestos is known to cause cancer and other respiratory problems and therefore must be removed by a licensed asbestos contractor if it is disturbed during planned renovation or demolition activities.

Asbestos is most dangerous when it is crushed, crumbled or disturbed (friable) such that fibers can be released into the air. Asbestos releases are possible during remodeling and demolition activities. These tiny fibers remain suspended in the air for long periods of time and can easily penetrate body tissues after being inhaled or ingested. This is a serious health threat to workers and the general public.

Handling, disturbing, removing and disposing of materials containing asbestos is regulated by EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP), the Washington Industrial Safety and Health Act (WISHA) Chapter 49.17 RCW, local air authorities, and Ecology in some areas of the state. The Associated General Contractors (AGC) offers a *Guide to Handling Asbestos-Containing Materials* (see Section 3.1.8 for more information).

## 3.1.1 Federal and State Regulations

| | |
|---|---|
| **Asbestos Hazard Emergency Response Act** (AHERA) | |
| **Code of Federal Regulations** | |
| **40 CFR Part 61, Subpart M** | **National Emission Standards for Hazardous Air Pollutants** (NESHAP) Administered by Ecology and often delegated to local air pollution agencies. Establishes work practices to minimize release of asbestos fibers during activities involving processing, handling and disposal of asbestos when a building is being demolished or renovated. |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-303-071 (3) (m) and 395 (3)** | Excludes asbestos from requirements of Dangerous Waste Regulations if the waste does not designate as a respiratory carcinogen and is managed in compliance with management procedures outlined in NESHAP. |
| **Chapter 173-460** | Identifies asbestos as a cancer causing substance |
| **Chapter 173-400-075** | Adopts by reference EPA's regulations for asbestos related to demolition and renovation projects. |
| **Chapter 296-62 & 65** | Describes requirements for asbestos removal and encapsulation, contractor certification, required supervisor and worker training, and asbestos project notification. |

## 3.1.2 Contractor Liability

Asbestos is a regulated substance. Contractors are responsible for determining whether a substance contains asbestos. Contractors who fail to test a material should proceed as if the material contains asbestos. Failure to realize that a substance contains asbestos does not absolve contractors from liability (see Appendix C - Contractor Responsibility and Liability for more information).

Beginning November 1992, the EPA requires an inspection by an EPA-certified inspector prior to remodeling, renovation, restoration or demolition of any apartment house, commercial or industrial building. Local air agencies may apply these rules to smaller projects. In addition, an asbestos removal plan must be developed by a designer certified under Asbestos Hazard Emergency Response Act (AHERA). Asbestos handling in schools (K-12) and public buildings must meet additional requirements outlined by EPA under the federal AHERA:

- Licensing of workers who work with asbestos-containing materials.

- Formal notification to the Department of Labor and Industries (L & I ) and the appropriate local air authority ten days prior to any asbestos abatement project. (see Table 3.1 - Air Authority Contact Information)
- Specific work practices and procedures governing asbestos removal, handling and disposal.

Contractors should also be aware that on most federal facilities WISHA regulations do not apply. Contact the US Department of Labor - OSHA (see Section 3.1.8, Contacts and Sources of Assistance, for more information.)

*To meet regulatory requirements and protect yourself from liability, contact L & I and your local air authority before beginning any work.*

## 3.1.3 Identifying Asbestos-Containing Substances

**Washington Administrative Code (WAC)**
**Chapter 296-62-07707(1)** Requires property owners to conduct a good faith survey

The asbestos fibers that can cause health problems are much too small to be seen without a microscope. To determine whether a material contains asbestos, have it analyzed by an accredited testing laboratory. Laboratories are listed in the *Yellow Pages* under "Laboratories, Analytical" and "Asbestos." A list of industrial hygiene consultants is available from L & I (see Appendix A).

Prior to construction, renovation, maintenance, repair or demolition projects, property-owners are required by WAC 296-62-07707(1) to perform a good faith survey or asbestos survey to determine the presence of asbestos that may be disturbed during the project. The survey or a "statement of reasonable certainty of non-disturbance" must be provided to the contractor at the bid stage. The contractor must have this document on-site as work begins.

It is possible to encounter hidden asbestos containing materials that were not discovered in the survey. Therefore, demolition and renovation workers and supervisors need to have asbestos awareness training. If any suspect asbestos containing materials are encountered, work which may disturb these materials must stop until identification and abatement are accomplished. The standard allows employers to omit testing if suspect materials are assumed to contain asbestos, and all asbestos precautions are followed.

## Table 3.1 Local Air Authorities

| | |
|---|---|
| **Washington Department of Ecology**<br>Air Quality Program<br>P.O. Box 47600<br>Olympia Washington 98504-7600<br>Phone 360-407-6800<br>Fax 360-407-6802 | **Ecology Northwest Regional Office**<br>3190-160th Ave SE<br>Bellevue, WA 98008-5452<br>Phone 206-649-7000<br>Fax 206-649-7098<br><br>**San Juan County** |
| **Northwest Air Pollution Control Authority**<br>1600 So. Second St. Mt.<br>Vernon, WA, 98273-5202<br>Phone 360-428-1617<br>Fax 360-428-1620<br><br>**Island, Skagit, Whatcom Counties** | **Puget Sound Air Pollution Control Agency**<br>110 Union Street, Suite 500<br>Seattle, WA 98101-2038<br>Phone 206-343-8800<br>Fax 206-343-7522<br><br>**King, Kitsap, Pierce, Snohomish Counties** |
| **Olympic Air Pollution Control Authority**<br>909 Sleater-Kinney Rd. SE, Suite 1,<br>Lacey WA 98503-1128<br>Phone 360-438-8768<br>Fax 360-491-6308<br>**Clallam, Grays Harbor, Jefferson, Mason, Pacific, Thurston Counties** | **Ecology Southwest Regional Office**<br>P.O. Box 47775<br>Olympia WA 98504-7775<br>Phone 360- 407-6300<br>Fax 360- 407-6305 |
| **Southwest Air Pollution Control Authority**<br>1308 NE 134th Street<br>Vancouver, WA, 98685-2747<br>Phone 360-574-3058<br>Fax 360-576-0925<br>**Clark, Cowlitz, Lewis, Skamania, Wahkiakum Counties** | **Ecology Central Regional Office**<br>15 West Yakima Ave, Suite #200<br>Yakima, WA 98902-3401<br>Phone 509-575-2490<br>Fax 509-575-2809<br>**Chelan, Douglas, Kittitas, Klickitat, Okanogan Counties** |
| **Yakima County Clean Air Authority**<br>6 South 2nd. Street, Room 1016<br>Yakima, WA, 98901<br>Phone 509-574-1410<br>Fax 509-574 -1411 | **Benton County Clean Air Authority**<br>650 George Washington Way<br>Richland, WA 99352<br>Phone 509-943-3396<br>Fax 509-943-0505 |
| **Ecology Eastern Regional Office**<br>N 4601 Monroe Street, Suite 202<br>Spokane, WA, 99205-1295<br>Phone 509-456-3114<br>Fax 509-456-6175<br><br>**Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, Whitman Counties** | **Spokane County Air Pollution Control Authority**<br>W 1101 College Ave, Suite 403<br>Spokane, WA 99201<br>Phone 509-456-4727<br>Fax 509-459-6828 |

### 3.1.4 Asbestos Contractor Licensing and Worker/Supervisor Certification

In Washington, contractors working with asbestos must be specially licensed and certified for asbestos work by L & I. This applies to workers and supervisors on an asbestos project. Worker certification requires 32 hours of classroom and hands-on training. Supervisor certification requires asbestos abatement work experience and 8 hours of additional training.

Certification training courses must be approved by L & I. For more information on certification, licensing, and accredited courses, contact the Department's Field Offices listed in Appendix A.

### 3.1.5 Notification of Asbestos Abatement

At least 10 days prior to the project, formal notification must be provided to the nearest L & I office (see Appendix A) and the appropriate air authority (see Table 3.1). Specific forms must be used and notification fees may apply.

### 3.1.6 Required Work Practices and Procedures

| |
|---|
| **Washington Administrative Code (WAC)**<br>**Chapter 296-62-077 - 077(61)** Occupational Health Standards - Safety Standards for Carcinogens including Asbestos |

Although work practices and procedures for worker protection in asbestos abatement are regulated by L & I, local air authorities may have additional requirements for community protection. The L & I regulations cover:

- Regulated areas and work practice controls
- Air monitoring
- Respirators, and respirator programs
- Protective clothing and decontamination facilities
- Medical surveillance

Disturbance of certain roofing and flooring materials using manual methods, and certain very small disturbances (less than 1 square foot) may be exempt from some of these requirements. Reduced requirements also apply to work with cement asbestos pipe. In early 1996, L & I will be extensively revising these requirements to reflect federal OSHA's 8/10/94 asbestos standards.

For additional or updated information about asbestos removal, worker safety, and handling contact L & I (see Appendix A).

For more information about regional air authority requirements, contact the local air authority for your area listed in Table 3.1.

### 3.1.7 Asbestos Disposal and Record Keeping

Disposal of asbestos must follow EPA's NESHAP. The rule requires:

- Methods required to contain asbestos waste (wet, double-bagged).
- Procedures for hauling waste.
- Disposal of asbestos containing material in an authorized landfill.
- Formal record keeping of asbestos waste disposal.

Asbestos waste or debris must be promptly disposed of at an approved disposal site. For specific authorized disposal sites or haulers, contact the local health department (see Appendix A). Availability of particular disposal sites may depend on where the removal was done.

Note: Copies of the notification (see section 3.1.5) will be needed at the time of disposal. The "Waste Shipment Record" (WSR) must be retained for your records.

## 3.1.8 Contacts and Sources of Assistance

Local Air Authorities (see Table 3.1)

In Puget Sound contact Puget Sound Air Pollution Control Authority for a copy of *Guide to Handling Asbestos Containing Material*, prepared by Associated General Contractors of WA Hazardous Waste Committee or call AGC at 206-284-0061 or 800-562-2868

Ecology Northwest Regional Office at 206-649-7107

For more information about asbestos removal, worker safety and handling contact:

- Department of Labor and Industry Field Offices (see Appendix A)

To apply for a contractor license or training course accreditation, contact:

- Asbestos Certification Program
  Department of Labor & Industries
  P.O. Box 44614
  Olympia, WA 98504-4614

For regulations and information pertaining to asbestos removal in schools or disposal of asbestos according to NESHAP, contact:

- EPA Region 10
  U.S. E.P.A.
  1200 Sixth Avenue
  Seattle, WA 98101

  AHREA 206-553-4762 NESHAP 206-553-1757 or 553-6219

  Contact EPA's Public Information Center at 206-553-1200 or 800-424-4EPA for copies of the following documents:

1. *How to manage Asbestos in School Buildings: AHERA Designated Person's Self Study Guide (Jan. 1996)*
2. *Asbestos-Containing Materials in Schools; Final Rule (October 1987)*
3. *Managing Asbestos in Place: A Building Owner's Guide to Operations and Maintenance Programs for Asbestos-Containing Materials ("Green Book", May 1988)*
4. *Guidance for Controlling Asbestos-Containing Materials in Buildings ("Purple Book", June 1985)*
5. *Asbestos Model Accreditation Plan; Interim final Rule (February, 1994)*
6. *Asbestos in Buildings: Guidance for Service and Maintenance Personnel (July 1985)*

For federal facilities contact

- US Department of Labor-OSHA

  206-553-7520 or 360-902-5431

# 3.2 Dust and Fugitive Emission Control

This section applies to construction or demolition activities that generate dust and other particulate matter.

## 3.2.1 State Regulations

| | |
|---|---|
| **Revised Code of Washington (RCW)** | |
| **Chapter 70.94.040** | Prohibiting any activity that causes air pollution. |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-400** | Focusing on the use of ”reasonable” precautions to control fallout and emissions that cause harm or damage property. |

## 3.2.2 Activities that Generate Fugitive Dust

Fugitive dust is particulate matter that becomes airborne by the forces of wind or people.

The following activities have the potential to generate fugitive emissions of particulate matter:

- Construction, alteration, repair or demolition of buildings or roads;
- Pre-construction activities, such as land clearing and grading;
- Trenching, landscaping and utilities placement;
- Vehicle traffic on unpaved roads;
- Mud, dirt “carry-out” onto paved surfaces;
- Handling, transport or storage of materials or wastes.

## 3.2.3 Recommended Precautions

Contractors should take reasonable precautions to prevent the generation and release of dust into the air, including:

- Using water (where available) to prevent the generation of fugitive particulate (dust). Water trucks can cover a wide area. Timing the application is key to the effectiveness of this alternative. Water should be added before and immediately (within fifteen minutes) after the soil is disturbed. However, using excessive

amounts of water may create water quality problems by causing runoff to streams or storm drainage facilities (see Chapter 2 - Water).

- Staging activities so that natural vegetation remains undisturbed as long as possible. If clearing the land is unavoidable, then methods similar to erosion control will also work for dust control. For example, the use of slope stabilizers like fabric filters, plastic sheeting, wind fencing or planting grass will reduce the amount of soil that may become airborne dust.

- Reducing the speed of vehicles on stretches of unpaved haul roads.

- Covering temporary haul roads with crushed aggregate and fly-ash is also an effective method

- Spraying lignin derivatives can also be effective in controlling emissions. Vegetable oils should be used. For economic and environmental reasons over-spraying is discouraged. **Never use waste oil for spraying**, because its use is prohibited by law. Waste oil should be recycled at your local recycling center. Additionally, use of petroleum oil is not recommended since it could create a liability problem.

- Paving early in the project. Pave haul roads and job-site ingress and egress on long-term projects. In the Pacific Northwest both concrete and asphalt pavements are cost effective methods of controlling dust.

- Chemicals such as calcium chloride, magnesium chloride, lignosulfosate, petroleum resins, polymers, and fiber based dust palliatives, are commonly used to form a crust that reduces the amount of dust generated by the wind. Be sure to monitor application rates and only use as directed. Be sure not to create additional runoff.

- Placing high and low pressure fogging nozzles at the point of generation can knock down particulates before they can be released to the ambient air.

- Covering stockpiles and disturbed soils with tarpaulins or vegetation. In the semi-arid Eastern Washington locations replanting with natural vegetation works well. However, irrigation may be necessary to aid growth.

- Covering haul trucks will reduce the amount of dust blown from the trailer compartment during transport.

- Installing hoods, fans and fabric filters to enclose and vent dusty materials.

- Providing adequate containment during sandblasting or similar operations.

- Cleaning vehicles before they leave the site to minimize mud/dirt carry out. (See Chapter 2, Section 2.4 - Discharges of Construction Washwaters before trying this option.)

- Using wet sandblasting when appropriate. Alternatives to sandblasting may be available.

- Removing material from paved streets: Sweeping should be considered first because hydraulic cleaning can create sediment and turbidity in storm drainage - which is considered a tributary to state waters. Whenever hydraulic cleaning is used, be sure to protect the storm drainage system; you may be inadvertently adding contaminants/sediments. (See Chapter 2, Section 2.4 - Discharges of Construction Washwaters before trying this option.)

### 3.2.4 Contacts and Sources of Information

- Ecology Regional Offices (see Appendix A)

- L & I Field Offices (see Appendix A)

- Local Health Departments (see Appendix A)

- *Control of Open Fugitive Dust Sources*, EPA-450/3-88-008 by C. Cowherd, G.E. Muleski, and J.S. Kinsey, Midwest Research Institute, 425 Volker Boulevard, Kansas City, MO 64110, (816) 753-7600.

## 3.3 Open Burning

This section applies to open burning of land clearing debris and construction or demolition waste. Open burning is the combustion of any material in an open fire or outdoor container that does not have emission controls. It is important to note that demolition waste must be sorted to remove any prohibited material (see Section 3.3.3) prior to burning.

Pollution from outdoor burning threatens public health and the environment, particularly in populated areas. A major source of complaints to health departments and environmental agencies is the use of fire to clear land and dispose of debris. Burn bans are imposed when air and weather conditions make burning particularly harmful.

Construction contractors who burn land clearing debris or demolition waste must adhere to Ecology regulations on open burning (see Sections 3.3.1 and 3.3.3 below). In addition, many local air pollution authorities have local burning ordinances. You must notify your local fire district/department before you burn (see section 3.3.4, Permits Required). Open burning violations can result in enforcement actions.

## 3.3.1 State Laws and Regulations

| | |
|---|---|
| **Revised Code of Washington (RCW)** | |
| **Chapter 70.94** | Prohibits outdoor burning of certain materials |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-400** | General Regulations for Air Pollution Sources |
| **Chapter 173-425** | Open Burning Regulations |

Open burning is prohibited when fallout from the burn extends beyond the property line, or it affects the health, safety or welfare of any person. Open burning is banned in areas where air quality is below environmental standards. Check with your local air authority listed in Table 3.1 for information about burn bans in your area. Open burning will be banned altogether in areas with populations greater than 10,000 by the end of the year 2000.

## 3.3.2 Definition of Open Burning

Open burning is the combustion of material of any type in an open fire or outdoor container that does not have combustion or emission controls. Examples are:

- Burning piles of yard debris or land-clearing debris.
- Burning stumps to clear land.
- Burning remains of demolished structures.

### 3.3.3 Prohibited Materials

The following materials may not be burned:

- garbage;
- dead animals;
- asphalt and petroleum products;
- paints, rubber products or plastics;
- paper other than what is necessary to start the fire;
- cardboard;
- wood treated with creosote, pentachlorophenol and CCA;
- construction debris;*
- metal; or
- any substance (other than natural vegetation) which when burned releases toxic emissions, dense smoke, or odors.

* The only materials that may legally be burned in an outdoor fire are natural vegetation and in some cases, clean, dry, untreated, unpainted wood that is not construction debris. For alternatives to burning of solid wastes, see Chapter 4, Solid Waste.

### 3.3.4 Permit required

In areas where burning is allowed, Ecology, local air authorities, fire protection authorities, or counties may issue permits for open burning. Additional information can be obtained by contacting the local air or fire protection authority. Prior to burning you must notify the local fire department/district to see if burning is authorized on that particular day.

### 3.3.5 Active Burn Ban Areas

Call the local air authority (see Table 3.1)

# 3.4 Installation of Woodstoves

This section applies to contractors who install woodstoves and fireplace inserts.

Residential wood heating emissions cause parts of Washington to fail federal health-based air standards. The federal Clean Air Act of 1990 directs states to take steps to attain air quality standards. Washington responded with regulations to ensure that all newly installed or replaced wood heating devices meet cleaner burning standards.

## 3.4.1 Federal and State Regulations

| | |
|---|---|
| **Code of Federal Regulations** | |
| **40 CFR, Part 60, Subpart AAA, Section 60.530 through 60.539B** | |
| | Federal wood heating regulations. |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-433** | Solid Fuel Burning Devices |
| **Chapter 51-20** | Indoor Air Quality |

These regulations require all new woodstoves to meet EPA certification standards. They also make it illegal to install used, non-certified woodstoves or fireplace inserts. Used, non-certified wood heating devices may be sold for scrap or traded for certified models.

## 3.4.2 Definition of Certified

Certified woodstoves and fireplace inserts have a permanent label attached (typically on the back). The label provides tested smoke emission levels and heating efficiency performance. EPA began certifying woodstoves and fireplace inserts in 1990. From 1988 through 1994, the Oregon Department of Environmental Quality (DEQ) certified woodstoves and fireplace inserts. Wood heating devices that have either the EPA or DEQ label are certified in the state of Washington. Washington does not have a separate woodstove certification program, but does accept EPA and DEQ certifications.

## 3.4.3 Building Permits

City and County building departments will not issue building permits for the installation of a non-certified woodstove or fireplace insert.

### 3.4.4 Contacts and Sources of Assistance

- Local Building Code Agency.

To obtain a current list of certified wood burning devices, contact:

- Wood Smoke Information Line
  800-523-4636

## 3.5 Chlorofluorocarbons

This section applies to contractors who service, maintain, repair or install air conditioners, refrigerators, chillers or freezers.

Many refrigerants used in refrigeration and air conditioning equipment contain chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), both of which can harm the earth's ozone layer. Title VI of the federal Clean Air Act amendments of 1990 call for strict regulations on the use of CFCs and HCFCs. This program has not been delegated to state or local authorities for implementation. The EPA develops and enforces these regulations.

### 3.5.1 Federal and State Laws and Regulations

**Code of Federal Regulations**
**40 CFR Part 82** Protection of Stratospheric Ozone - Refrigerant Recycling

**Clean Air Act**, Section 608

**Washington Administrative Code (WAC)**
**Chapter 173-303** CFC exemption for recycling

Section 608 of the Clean Air Act amendments of 1990 requires a recycling and emission reduction program which:

- Requires practices that maximize recycling of CFCs and HCFCs during service and disposal of air conditioning and refrigeration equipment.
- Prohibits venting refrigerant to the atmosphere.
- Requires service technicians be certified by EPA or equivalent.
- Restricts sale of refrigerant.
- Mandates repairs of substantial leaks in equipment with a charge greater than 50 pounds.

## 3.5.2 Certification and Protection from Liability

Contractors are liable for civil penalties for violations of the Clean Air Act. Civil penalties are up to $25,000 per day per violation. Equipment owners and contractors should consider hiring service technicians who hold a CFC certification from an EPA-approved organization.

## 3.5.3 Contacts and Sources of Assistance

For information on alternatives for disposal or local landfills/receiving facilities' programs to capture CFCs from equipment, contact:

- Local Solid Waste Departments

For regulations and information regarding the use and handling of refrigerants, contact:

- EPA Region 10
  U.S. E.P.A.
  1200 Sixth Avenue
  Seattle, WA 98101
  206-553-4762

- EPA Stratospheric Ozone
  Information Hotline
  800-296-1996
  10:00 a.m. - 4:00 p.m. eastern time

# Chapter 4
# Solid Waste

This chapter applies to any contractor generating solid waste.

Waste management can be a considerable cost for construction contractors and subcontractors in Washington State. It is becoming more difficult and expensive to dispose of construction and demolition (C&D) waste because of stricter environmental regulations and shortage of inexpensive landfill space. One effective way to lower disposal costs at a construction site is to reduce, reuse and recycle C&D waste.

State policy encourages waste minimization, reuse and recycling. To that end, the State has partnered with local governments to promote C&D recycling and waste prevention. See section 4.3 for additional contacts regarding recycling and prevention opportunities or consult Appendix A for contacts at regulatory agencies.

## 4.1 State Law & Regulations

| | |
|---|---|
| **Revised Code of Washington (RCW)** | |
| **Chapter 70.95** | Solid Waste Management - Reduction and Recycling Act<br>Establishes the solid waste handling hierarchy with waste reduction or prevention and recycling leading the management strategy. |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-304** | Minimum Functional Standards for Solid Waste Handling<br>Establishes the minimum functional standards for solid waste handling facilities. This only applies to facilities like landfills, transfer stations, and other collection, receiving or processing facilities. It also defines construction and demolition wastes. |

## 4.2 Washington's Solid Waste Policy

In Washington State, the primary responsibility for solid waste programs is in the hands of local government. While the state sets minimum handling standards, local governments, primarily the jurisdictional health departments, have the option of establishing stricter standards and have direct authority over regulating solid waste. Thus, regulations differ from one jurisdiction to the next.

This section deals only with the regulation of solid waste as expressed in laws and regulations enforced by Ecology. Your hauler should be aware of regulations from the Department of Transportation and the Washington State Utilities and Transportation Commission that may affect transportation of solid waste. However, these regulations do not directly affect your service.

In 1989 the state Legislature passed, House Bill 1671, known as the "Waste Not Washington Act." This bill amended Chapter 70.95 RCW, and among other things, established the following hierarchy:

- Waste Reduction;
- Recycling, with source separation of recyclable materials as the preferred method;
- Energy recovery, incineration or landfill of separated waste; and
- Energy recovery, incineration or landfill of mixed wastes.

## 4.3 Recycling Opportunities

The Waste Not Washington Act also established an aggressive state-wide recycling goal of 50 percent. Contractors can help the state reach its goal by recycling materials they generate on-site. In addition, you can help minimize the burden on our limited landfills by recycling, reusing and reducing waste on-site. For instance, consider controlling/monitoring purchases to manage waste, i.e. to minimize waste, only order what you need for a project.

Many materials left over from construction or demolition sites are usable or recyclable. Examples include clean wood, demolition wood, cardboard, drywall, land-clearing debris, bricks, asphalt, concrete and scrap metal. In all cases, reuse or recycling are the preferred methods for managing solid waste generated at your site. And, in many cases, recycling gives you a price-advantage over disposal costs. Wood debris for example, is becoming more valuable for competing uses such as particle board, wood chips, hog fuel and compost. See section 4.8, Contacts and Sources of Information, for more information on local recycling and waste prevention programs. Also, when researching local recycling options include composting facilities. Many compost facilities accept landclearing and other wood wastes.

## 4.4 State Solid Waste Disposal Regulations

State regulations define "demolition" waste as "largely inert waste, resulting from the demolition or razing of buildings, roads and other man-made structures" [WAC 173-304-100 (19) and (40)]. It also includes debris from land clearing when that debris is mixed with other construction and demolition waste. This definition **excludes** plaster (i.e., sheet rock or plaster board), and other materials (besides demolition wood) that are likely to produce gases or leachate during decomposition, and specifically **excludes** asbestos wastes. For information on disposal of materials containing asbestos and proper handling of these materials see Chapter 3, Air, section 3.1, and Chapter 5, Hazardous Waste, section 5.10.

Pursuant to state regulations, all solid waste in Washington must be disposed of at a proper disposal site permitted by the jurisdictional health department. Demolition waste that is not reused or recycled, must be disposed in an inert/demolition landfill or other landfill accepting this material. Table 4.1 lists landfills that accept Inert and Demolition waste and also includes some transfer stations and Municipal Solid Waste (MSW) landfills permitted to accept this type of waste. While some landfills are permitted exclusively for waste defined by regulation as inert and demolition waste, many MSW landfills and some "limited purpose" landfills are permitted to accept waste streams generally generated in the process of construction. Call the Ecology regional office in your area for information on other landfills that may also accept Inert and Demolition waste (see Appendix A).

## Table 4.1

## Permitted Facilities Receiving Inert/Demolition and Construction Waste* in Washington State, 1996

| County | City | Facility | Address | Phone |
|---|---|---|---|---|
| Benton | Prosser | Prosser Inert-Demo Site | PO Box 271 | 509-786-2332 |
| Chelan | Wenatchee | Box Canyon Site | PO Box 3181 | 509-663-0496 |
| Chelan | Cashmere | Fillion Inert/Demo Site | 5600 Nahahum Canyon Road | 509-782-1010 |
| Grays Harbor | Hoquiam | Adams St. Inert Wst Dis Site | 609 Eighth St | 360-532-9330 |
| Island | Coupeville | Coupeville Demolition LF | PO Box 5000 | 360-679-7340 |
| Jefferson | Port Hadlock | Indian Island Landfill | 100 Indian Island Road | 360-396-5363 |
| King | Renton | Black River Facility | 501 Monster Rd. SW | 206-235-0269 |
| King | Seattle | Argo Yard Facility (Intermodal Container Units Only) | 5000 Denver Ave S | 206-762-3000 |
| King | Seattle | Eastmont Facility | 7155 West Marginal Way SW | 206-762-3000 |
| King | Seattle | Third & Lander Facility | 2733 - 3rd Ave S | 206-646-2565 |
| King | Seattle | City of Seattle | | |
| | | North Recycling/Disposal St. | 1350 N 34th Street | 206-684-7600 |
| | | South Recycling/Disposal St. | 8100 - 2nd Ave s | 206-684-7600 |
| Kitsap | Port Orchard | Morrison Gravel Inc. | 1004 SE Spencer Ave | 360-876-4701 |
| Pierce | McNeil Island | Foran Landfill | PO Box 1477 | 206-232-6662 |
| Pierce | McChord AFB | McChord Landfill | Solid Waste 62 SPTG/CEV | 206-984-3913 |
| Pierce | Tacoma | Wm. Dickson Comp. Landfill | 3315 S Pine Street | 206-472-4489 |
| San Juan | Friday Harbor | Friday Harbor Landfill | PO Box 219 | 360-378-2130 |
| Snohomish | Everett | Associated Sand & Gravel | PO Box 2037 | 206-355-2111 |
| Spokane | Spokane | Acme Crestline Recycling | PO Box 2503 | 509-536-8323 |
| Spokane | Spokane | Beeler Inert/Demo Facility | E 3205 32nd | 509-535-1137 |
| Spokane | Spokane | Central Pre-Mix Site | PO Box 3366 | 509-534-6221 |
| Spokane | Spokane | Chester Inert/Demo Landfill | 7418 E Second | 509-926-4023 |
| Spokane | Liberty Lake | Whitman College Site | S 525 Alpine Dr | 509-255-9316 |
| Spokane | Medical Lake | Graham Road Recycling/Disp. | 1820 S Graham Rd | 509-244-0151 |
| Whatcom | Everson | County Construction Recycler | 1902 Hemmi Rd | 360-398-8204 |
| Whitman | Pullman | Poe Asphalt | 2012 Pullman Moscow Hwy 5 | 509-334-6400 |
| Whitman | Pullman | Terra View Drive Fill | PO Box 303 | 509-332-1412 |
| Yakima | Yakima | Anderson Demolition Site | 41 Rocky Top Rd | 509-965-3621 |
| Yakima | Selah | Clark Demolition Facility II | 210 Sole Rd | 509-697-6883 |

* Not all facilities listed accept all possible wastes generated at C&D projects, call first to verify acceptance policies and read Chapter 5, Hazardous Waste, to make sure you're only sending appropriate solid wastes to these facilities.

### 4.4.1 Waste and Recycling Collection

Recyclable materials may be collected from a construction site and transported to a recycling facility without using a franchised hauler if the builder/owner so decides. Under WAC 480-70-050 (14), solid waste collection regulations do not extend to materials destined for recycling. This means that builders can make arrangements with local recyclers to collect on-site and transport to a recycling facility any and all recyclable materials.

## 4.5 Prohibited Disposal

Washington law prohibits disposal of the following materials at any solid waste disposal site, including inert/demolition landfills. These items must be recovered or recycled. Many municipal solid waste landfills and transfer stations accept these materials for recycling for a fee. For more information on recovery or recycling options, contact your local solid waste department or Ecology's Recycling Hotline at 1-800-RECYCLE.

- Used oil may be recycled by an oil re-refiner or processor. Call the Recycling Hotline for locations accepting used motor oil or consult your local solid waste department or the local yellow pages under "Oils-Waste." Used oil that is not recycled or used as fuel must be managed as a hazardous waste.

- Old vehicles and autobodies can be recycled by a wrecking yard or scrap metal dealer.

- Lead-acid batteries may be taken to a retailer, wholesaler, collection or recycling facility or to a state- or EPA-permitted secondary lead smelter. If not recycled, lead acid batteries must be managed as a hazardous waste. Contact your local solid waste department or Ecology's Recycling Hotline, 1-800-RECYCLE.

Some local jurisdictions have prohibited the disposal of additional materials, such as

- Home or industrial appliances

- Whole tires. Some transfer stations and drop-off depots accept tires for a minimal fee. Contact your local solid waste department or Ecology's Recycling Hotline for recycling options.

To determine which materials are prohibited from disposal or to find out more information about local recycling collection programs call your local solid waste or

public works department, or consult Appendix A for a listing of the local health departments.

## 4.6 Hazardous and Other Special Waste

In Washington, all businesses whose operations generate solid wastes are required by law to identify and evaluate their waste. In other words, if you generate solid wastes, you must determine if they are considered hazardous. Construction and demolition debris that is hazardous must be stored and disposed of according to the requirements outlined in Chapter 5, Hazardous Wastes. This chapter covers laws and regulations pertaining to the identification and proper handling, storage and disposition of hazardous materials. See Section 5.2, Determining Which Wastes Are Hazardous, for more information. In addition, some wastes such as those containing asbestos and polychlorinated biphenyls (PCB) must be stored according to strict regulations and disposed of in special landfills. See Chapter 5, Waste Requiring Special Handling (sections 5.8 - 5.12) and Chapter 3, Air.

## 4.7 Storage and Collection of Waste

Washington also regulates how waste is collected and stored as follows:

- Solid waste must be collected and stored to prevent: conditions for transmission of diseases to man or animals; hazards to service or disposal workers or the public; air pollution; water pollution or escape of solid wastes or contaminated water to public waters; objectionable odors; dust; unsightliness; aesthetically objectionable conditions; vector (rats, flies, etc.) growth; or other nuisance conditions.

- Storage bins and storage areas must be watertight, rodent-proof, cleanable and operated in such a way to minimize leakage or spillage.

- Areas around the storage area must be regularly cleaned.

Solid waste must be removed at regular intervals. Check with city or county officials to find out local storage, safety and removal requirements.

## 4.8 Contacts and Sources of Information

| For information on recycling opportunities in your area, contact: |
|---|

- Local Solid Waste Departments
- Ecology's Recycling Hotline - 1-800-RECYCLE.

### Table 4.2 Regional Recycling Information

Many localities offer regionally specific recycling information, for instance, Seattle/King County, Skagit County, Spokane County, Thurston County and Whatcom County offer brochures and phone information services on C&D recycling opportunities. Contact Ecology's Recycling Hotline for contact information in other areas.

- **Seattle** - call the Business and Industry Recycling Venture at 206-389-7304 or **King County, outside of Seattle** - call the Solid Waste Division at 206-296-8480. Ask for a copy of the *Contractors' Guide to Handling Waste.*
- **Skagit County** - call the Skagit Construction Recycling Hotline at 800-760-8434. Ask for a copy of the *Skagit County Construction Recycling and Reuse* brochure
- **Spokane County** - call 509-456-6349 or 509-456-7403 for technical assistance and information referral.
- **Thurston County** - call 360-753-8368 or 360-757-2498. Ask for a copy of the *Recycling Services for Contractors* brochure. Outside free calling area, call 800-624-1234 ext. 2491
- **Whatcom County** - call the Recycling Hotline at 360-676-5723 or 384-8040. Ask for a copy of the *Construction Recycling and Reuse Opportunities* brochure.

### Table 4.3 Job-site Recycling Information

For more information about job-site recycling and sustainable building, contact:

- Ecology Regional Office - Solid Waste & Financial Assistance Program (see Appendix A)
- Local Solid Waste or Public Works Department
- Clean Washington Center at 206-389-2808 or fax 206-464-6902 for a copy of their *Recycling Plus Program Manual,* or EcoBuilding Guild at 206-622-8350.

# Chapter 5Hazardous Waste

This chapter outlines federal and state hazardous waste requirements that apply to construction activities. These requirements apply to a contractor's shop or office, as well as to job-sites where a contractor or subcontractor is working. Although the property owner is responsible for meeting all the requirements outlined in this chapter, a contractor is still responsible for managing hazardous wastes according to federal, state and local requirements (see Appendix C - Contractor Liability for a more detailed discussion of liability). It is important for property owners to understand that the determination of the site's generator status (see Section 5.3 below) includes the total amount of hazardous waste generated for the site - that is for all of the contractors and their subs.

Construction activities may generate small amounts of hazardous waste. Common examples where hazardous wastes are generated during construction and demolition activities are:

- Hazardous material, such as a solvent, that has been used and is spent.
- Stored materials, such as paint and pesticides, that exceed their shelf life and are no longer usable.
- Wastes from demolition including: asbestos ceiling tiles, mercury switches, fluorescent lamps, materials coated with lead based paint, lead pipes, chlorofluorocarbons from refrigeration, heating, ventilation and air conditioning (HVAC) equipment, and abandoned hazardous materials.
- Materials that become contaminated including: solvents and spent sand blast grit.
- Equipment maintenance wastes, such as antifreeze and batteries.
- Spilled materials.

Through accidental spills, hazardous waste can pollute land, surface water and groundwater. Hazardous waste improperly discharged to a sewage system may contain toxic materials that adversely affect the treatment process at the sewage treatment plant. Some hazardous wastes may pass through a sewage treatment facility without being chemically changed.

Improper disposal of hazardous waste is illegal and can lead to costly cleanups and potential penalties. Under federal law, businesses are liable for cleanup of improper hazardous waste disposal as well as hazardous waste spills or releases (see Chapter 6, Spills).

Ecology implements both state and federal hazardous waste regulations in Washington. Ecology regulates companies that generate more than 220 pounds per month or accumulate more than 2,200 pounds on site as medium (MQG) or large

quantity generators (LQG). Local government regulates businesses that operate below these thresholds as small quantity generators (SQG). Section 5-3 shows you how to determine your generator status. Ecology and local moderate risk waste coordinator contacts are listed in Appendix A**.**

Following the general requirements for hazardous waste handling, disposal and recycling, this chapter includes information about hazardous waste that has special handling requirements - fluorescent lamps, polychlorinated biphenyls (PCBs), asbestos, lead (including paint) and chlorofluorocarbons (CFCs).

## 5.1 Federal and State Laws and Regulations

**Resource Conservation and Recovery Act (RCRA)** Federal statute regulating solid and hazardous waste.

**Hazardous Material Transportation Act (HMTA)** Federal rule governing transportation of hazardous materials.

**Code of Federal Regulations**

**40 CFR Parts 148 & 260-282** Federal regulations on hazardous waste management

**49 CFR parts 171-179** Federal regulations on transporting hazardous materials.

**Revised Code of Washington (RCW**)

**Chapter 70.105** State Hazardous Waste Statute - creating hazardous waste management system for Washington State.

**Washington Administrative Code (WAC)**

**Chapter 173-303** State Dangerous Waste Regulations - rules governing hazardous waste management.

**Chapter 173-305** State Hazardous Waste Fees - outlines the fee structure, who is obligated to pay the fees, and administrative processes.

**Chapter 173-307** State Pollution Prevention Plans - details the planning requirements for pollution prevention plans.

**Chapter 173-340** Model Toxics Control Act (MTCA) Cleanup Regulation - state laws governing clean-up of contaminated sites.

## 5.2 Requirements to Determine Which Wastes Are Hazardous

The only way to manage hazardous waste properly is to evaluate all of your solid wastes to determine if they are also hazardous.

In Washington, all businesses that produce solid waste are required by law to identify and evaluate their waste. If you generate solid wastes, you must determine if they are considered hazardous. Demolition activities, as well as construction, may generate or uncover hazardous wastes. Washington's hazardous waste management rules are more stringent than federal requirements and capture additional wastes not regulated under federal rules. Although the terms "hazardous" and "dangerous" are used interchangeably in Washington, it is important to note that "dangerous waste" is a broader term that includes wastes not regulated by the Federal EPA as hazardous wastes, but that are regulated in Washington. Additionally, a group of wastes posing higher risk called "Extremely Hazardous Waste" (EHW) has been identified under the Washington waste designation scheme. The process of designating hazardous waste as described in WAC 173-303-070 will help classify your generator status (see Section 5.3 below).

For more information concerning designation of hazardous waste, contact the Ecology Regional Office listed in Appendix A.1. They can provide you with guidance and a designation flow chart which will help you understand the process of designating hazardous waste.

## 5.3 Determining Hazardous Waste Generator Status

Generators who produce hazardous waste must make the following determinations:

- Total amount of hazardous waste produced in each calendar month at a site.
- Total quantity of hazardous waste stored on site.
- Generator category based on the monthly amount of hazardous waste generated and/or accumulated. (See Table 5.1)

Hazardous waste generators are divided into three categories (see Table 5.1 for information on monthly quantity determinations): Small Quantity Generators (SQG); Medium Quantity Generators (MQG); and Large Quantity Generators (LQG). Regulations affecting reporting, manifesting, and management of hazardous waste are different among the generator categories. Therefore, it is important to accurately determine your generator category. SQGs have the least stringent requirements, while LQGs have the most stringent requirements. MQGs have some reporting and manifesting requirements similar to LQGs.

Designating your waste at the site where it is generated will dictate how it must be managed and what regulations apply. If a site is classified as a MQG or a LQG, then the site owner or operator must obtain an RCRA Site Identification Number and

manage the waste as prescribed in Chapter 173-303 WAC, Dangerous Waste Regulations. RCRA Site Identification Numbers are site-specific, as opposed to generator (business) specific. All contractor(s) producing more than 220 pounds of hazardous waste on a site will be required to obtain an RCRA Site Identification Number. Site owners are required to complete Ecology's Form 2, "Notification of Dangerous Waste Activities," in order to obtain an RCRA Site Identification Number.

It is important to note this distinction since regulated hazardous wastes may not be transported back to the primary business location. If a contractor generates hazardous waste at a site that already has an identification number, they must make arrangements with the owner/operator of that site for hazardous waste management under that identification number. If you have questions regarding whether or not a site requires an identification number, please contact the Hazardous Waste Program at the nearest Ecology Regional Office (see Appendix A).

Most contractors qualify as SQGs or MQGs. Contractors who qualify as SQGs may be eligible to dispose of their hazardous wastes at collection sites operated by local governments. This option can be less expensive. Information on local programs may be obtained from local government sources or Ecology regional offices (see Appendix A).

## 5.4 Annual Reporting of Hazardous Waste

Sites that qualify as SQGs and do not have a RCRA Site identification number do not need to submit annual hazardous waste reporting forms to Ecology.

MQGs or LQGs must report annually to Ecology the quantity of waste generated for each site. The agency's annual reporting instructions describe exactly who needs to submit forms and which forms to complete. For guidance or a copy of the forms, contact Ecology at 360-407-6170 or any of the regional offices listed in Appendix A.

**Table 5.1**

**Hazardous Waste Generator Status Based on Monthly Amount of Hazardous Waste Generated**

| **Small Quantity Generator (SQG)** | **Medium Quantity Generator (MQG)** | **Large Quantity Generator (LQG)** |
|---|---|---|
| Generate 220 pounds or less of dangerous waste, or | Generate more than 220 pounds but less than 2,200 pounds of dangerous waste, or | Generate 2,200 pounds or more of dangerous waste, or |
| generate 220 pounds or less of spill cleanup debris containing dangerous waste, or | generate more than 220 pounds but less than 2,200 pounds of spill cleanup debris containing dangerous waste. | generate 2,200 pounds or more of spill cleanup debris containing dangerous waste, or |
| generate 2.2 pounds or less of acutely* hazardous waste or EHW. | May accumulate up to 2,200 pounds of dangerous waste on-site. | generate greater than 2.2 pounds of acutely* hazardous waste, or |
| May accumulate up to 2,200 pounds of dangerous waste on-site regardless of time provided the above accumulation rates are not exceeded. | | generate more than 220 pounds of spill cleanup debris containing an acutely* hazardous waste.<br><br>At any time accumulate more than 2.2 pounds of acutely* hazardous waste, on-site, or accumulate more than 2,200 pounds of dangerous waste on site. |

*****Acutely Hazardous Waste" means dangerous waste sources (listed in WAC 173-303-9904) F020, F021, F022, F023, F026, or F027, and discarded chemical products (listed in WAC 173-303-9903) that are identified with a dangerous waste number beginning with a "P", including those wastes mixed with source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954.

## 5.5 Hazardous Waste Manifest/Packaging and Transporting Requirements

MQG's and LQG's are required to complete a Uniform Hazardous Waste Manifest to accompany each shipment of waste off-site. In addition, hazardous waste containers shipped off-site must meet the requirements of the US Department of Transportation and Washington State Patrol. For more information on manifest/packaging and transporting requirements, contact your Ecology regional office or the Washington State Patrol (see Section 5.13, Contacts and Sources of Assistance).

## 5.6 Toxics Use Reduction Plans

Businesses that generate in excess of 2,640 pounds of hazardous waste annually or that are required to report under SARA Title III, Section 313 are required to develop plans that help reduce the amount of toxic substances they use and the amount of hazardous waste generated in their activities. Planners are required to develop performance goals and report annually to Ecology on their progress. Ecology has developed a planning guide entitled "Pollution Prevention Planning Guidance Manual" (see Section 5.13, Contacts and Sources of Assistance, for more information.)

## 5.7 Additional Hazardous Waste Management Requirements

There are additional federal, state and local regulations guiding the management of hazardous waste that are not listed in this document. These requirements vary depending on the generator status and type of waste generated. To help businesses understand these requirements, Ecology and local governments have developed a variety of guidance documents. Local government contacts can provide you with specific local information (see Appendix A).

## 5.7.1 Contacts and Sources of Information

For information about Ecology's publications contact an Ecology Regional Office (see Appendix A) or call Ecology's Publications Distribution Office at 360-407-7472.

Guidance documents:

*Step by Step - Generator Fact Sheets for Hazardous Waste Generators (91-12)*

*Creosote Treated Wood Excluded from Regulations (F-HWTR- 93-534)*

*A Guide for Businesses: SARA Title 3 (93-BR-1 CRTK)*

*Hazardous Materials Regulations (95-412 CRTK)*

*Hazardous Waste Considerations In Real Estate Transactions (R-TC-92-115)*

*Site Hazard Assessment Guide (91-73)*

*Reporting Releases of Hazardous Substances (R-TC-94-133)*

*List of Laboratories Performing Tests for Dangerous Waste (F-HWTR-93-526)*

*Choosing an Analytical Laboratory for Dangerous Waste Testing (available only from Regional offices)*

*Transporting Hazardous Waste and Hazardous Materials - Information for Small Quantity Generators (96-4000)*

*Hazardous Waste Services Directory (91-125)*

# Wastes Requiring Special Management

This section applies to contractors who generate construction and demolition waste that may contain fluorescent lamps, polychlorinated biphenyls (PCBs) including electrical ballasts, asbestos, lead (including paint), and chlorofluorocarbons (CFC)

Some construction and demolition (C&D) materials contain waste that is subject, or may soon be subject, to special state and federal regulations upon disposal. These regulations are separate from those outlined earlier in this chapter and in Chapter 4, Solid Waste. These wastes include mercury-containing fluorescent lamps, PCBs found in electrical ballasts (devices used to maintain electrical currents at constant values), asbestos, lead paint and pipes, and refrigerants that contain chlorofluorocarbons (CFCs).

## 5.8 Fluorescent Lamps

**Resource Conservation and Recovery Act (RCRA)** Federal statute regulating solid and hazardous waste.

**Washington Administrative Code (WAC)**
**Chapter 173-351** Criteria for Municipal Solid Waste Landfills

Some fluorescent lamps contain mercury which is harmful to the environment and human health. EPA is contemplating the regulatory status of spent fluorescent lamps under the federal Resource Conservation and Recovery Act (RCRA). Some states have already passed legislation regulating disposal of these lamps.

If your construction activities involve removal and disposal of fluorescent lamps, you should be aware of changing regulations. Contact Ecology's Hazardous Waste and Toxics Reduction Program at 360-407-6700 or see Appendix A for regional contacts.

Ecology has adopted an interim policy on the disposal of fluorescent lamps. This interim policy provides the following guidance:

1. Ecology strongly encourages the recycling of fluorescent lamps as the preferred management method. Fluorescent lamps are made of recyclable and recoverable resources. A list of fluorescent lamp recycling companies is included (see Table 5.2) The list also includes companies which recycle ballasts.

2. Ecology will use enforcement discretion in dealing with this waste stream. This means that as long as lamps are disposed of in solid waste landfills permitted

under Chapter 173-351 WAC to receive municipal solid waste (MSW), Ecology will not take enforcement action. If you have questions about permitted landfills in your area, call the regional Ecology office listed in Appendix A. Operators of these permitted MSW landfills may refuse to accept the lamps. Generators should contact the landfill directly to determine the disposal policy of the facility. Fluorescent lamps may not be sent to a municipal waste incinerator or demolition landfill. Crushing of the lamps prior to transport is not recommended for recycling or disposal unless equipment specifically designed to control the loss of mercury vapor is used. In addition, measures should be taken to prevent breakage of the fluorescent lamps while the lamps are in transit to their destination.

3. Generators who know their lamps designate as hazardous waste may wish to send them to a permitted TSD (hazardous waste Treatment, Storage and Disposal facility) for liability reasons. If you have questions call Ecology's Regional Offices listed in Appendix A.1.

## 5.9 Polychlorinated Biphenyls (PCBs)

Polychlorinated biphenyls (PCBs) were widely used before 1979 to insulate electrical equipment such as capacitors, switches and voltage regulators. PCBs were used in capacitors inside fluorescent light ballasts, a PCB item frequently encountered by contractors. PCBs are considered hazardous because studies have shown them to cause cancer as well as reproductive and developmental defects in laboratory animals. Handling and disposal of materials containing PCBs are regulated by federal and state law.

If your construction activities involve removal or disposal of electrical ballasts or other PCB containing equipment, you must follow the regulations outlined below. Ecology regulates transformers, bushings, and capacitors that may contain dielectric insulating fluids with PCB concentrations from one to fifty parts per million (ppm). The Environmental Protection Agency regulates PCB containing devices above the fifty ppm level. The regulation of PCBs is complex and often confusing. Regulatory technical assistance is available from both Ecology and EPA (See Appendix A.1 and Section 5.9.6).

### 5.9.1 Federal and State Regulations

| |
|---|
| **Toxic Substances Control Act (TSCA)** |
| **Code of Federal Regulations** |

| | |
|---|---|
| **40 CFR Part 261.8** | Federal rule exempting PCBs from hazardous waste regulations if they are regulated under 40 CFR Part 761 and only designate for certain waste codes |
| **40 CFR Part 761** | Federal laws and regulations governing disposal and liability from improper disposal of PCB-containing materials |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-303** | Washington Dangerous Waste Regulations |

## 5.9.2 Determining if Ballasts Contain PCBs

Before disposing of electrical ballasts, you must determine if they contain PCBs. All ballasts manufactured through 1978 contain PCBs. Some ballasts manufactured after 1978 contain PCBs. If a ballast does not carry a "No PCBs" label, assume it contains PCBs.

There are several Washington testing labs that can test ballasts for PCBs. Look in the Yellow Pages under "Analytical Laboratories," or call Ecology's Hazardous Waste and Toxics Reduction Program (see Section 5.13, Contacts and Sources of Assistance).

## 5.9.3 Disposal of PCB-Containing Ballasts

Although PCB ballasts and capacitors are included in the state Dangerous Waste Regulations as a dangerous waste source (WAC 173-303-9904), they are sometimes excluded from these regulations when regulated by the federal Toxic Substances Control Act. These exclusions are identified in WAC 173-303-071(3)(k). For more information on exclusions and proper disposal for PCB-containing ballasts, see Section 5.9.6, Contacts and Sources of Assistance for PCBs.

## 5.9.4 Recycling Ballasts

Used, non-leaking ballasts may be recycled whether or not they contain PCBs. Recycling reclaims valuable metals, such as copper and steel. It reduces the volume of solid waste sent to landfill sites and prevents toxic substances from being burned in an incinerator or buried in a landfill. For recycling options, see Table 5.2

### 5.9.5 Recommended Handling of Leaking PCB-Containing Ballasts

Leaking ballasts are a skin contact hazard. Contact L & I field offices for worker protection information (see Appendix A).

## 5.9.6 Contacts and Sources of Assistance for PCB's

- EPA Region 10
  Office of Waste and Chemicals Management
  1200 Sixth Avenue
  Mail Stop WCM-128
  Seattle, WA 98101
  206-553-6693 or
  800-424-4EPA, Ext. 6693

  The following documents are available from EPA:

  *Summary of General PCB Regulations*, EPA/910-S-95-001, August, 1995

  *PCBs in Fluorescent Light Fixtures*, A Fact Sheet, EPA Region 10, May 1993

  *PCB Q & A Manual*, EPA Chemical Management Division, October 1984

  *Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup*, EPA-560/5-86-017, May 1986

  *Verification of PCB Spill Cleanup by Sampling and Analysis*, EPA-560/5-85-026, August 1986

  *Wipe Sampling and Double Wash/Rinse Cleanup*. EPA Chemical Management Division, June, 1987, Revised April, 1991

- EPA Toxic Substances Information Hotline
  Washington, DC
  202-554-1404

- Ecology Regional Offices (see Appendix A)

## TABLE 5.2

## BALLAST & FLUORESCENT LAMP RECYCLING COMPANIES

| | | | |
|---|---|---|---|
| Advanced Envtal Recycling Corp | Allentown, PA | 800 554 2372 | Lamp Recycling |
| Alta Resource Management | Springfield, MA | 413 734 3399 | Ballast/Lamp |
| Ballast & Lamp Recycling | Indianapolis, IN | 317 782 3228 | |
| Bethlehem Apparatus | Hellertown, PA | 215 838 7034 | Lamp Recycling |
| Dynex Environmental | Greendale, WI | 414 421 4959 | Lamp Recycling |
| Dynex Environmental | St. Paul, MN | 612 784 4040 | Ballast Recycling |
| Eastern Environmental Tech. | Norwalk, CA | 203 856 2014 | Ballast Recycling |
| Ecolights NW | Seattle, WA | 206 343 1247 | Lamp Recycling |
| Ensquare, Inc | Brooklyn, MA | 617 776 7320 | |
| Ensquare, Inc | Newton Falls, MA | 617 969 9238 | Ballast Recycling |
| Environmental Energy Group | Denton, TX | 817 383 3632 | Ballast Recycling |
| Full Circle Ballast Recycling | Bronx, NY | 718 328 4667 | (800) 775 1516 |
| Full Circle Ballast Recycling | Cambridge, MA | 617 876 2229 | |
| Global Recycling Technologies | Stoughton, MA | 617 341 6080 | Ballast/Lamp |
| Light Circle, Inc | St. Paul, MN | 612 641 1309 | Ballast/Lamp |
| Lighting Recyclers of Oregon | Portland, OR | 503 233 0420 | Lamp Recycling |
| Lighting Resources | Sheridan, WY | 800 572 9253 | Ballast/Lamp |
| Mercury Recovery Systems | Monrovia, CA | 818 301 1372 | Lamp Recycling |
| Mercury Refining Co, Inc | Albany, NY | 800 833 3505 | Lamp Recycling |
| Mercury Technologies Int'l | Hayward, CA | 800 628 3675 | |
| Mercury Technologies Int'l | St. Paul, MN | 800 864 3821 | Lamp Recycling |
| Quicksilver Product Inc | Brisbone, CA | 415 468 2000 | Lamp Recycling |
| Recyclights | Minneapolis, MN | 612 378 9571 | Lamp Recycling |
| Salesco, Inc | Phoenix, AZ | 800 368 9095 | Ballast Recycling |
| SD Myers | Tallmadge, OH | 216 633 2666 | Ballast/Lamp |
| Sorci Industries | Langley, BC | 604 857 5588 | Ballast/Lamp |
| Techswest Inc | Portland, OR | 503 226 2993 | Lamp Recycling |
| Transformer Services Inc | Concord, NH | 603 224 4006 | Ballast Recycling |
| Transtec Environmental | Niagra Falls, NY | 716 283 6174 | Ballast Recycling |
| USA Western Lights | Roseville, MN | 612 635 0080 | Lamp Recycling |
| Western Pacific | Seattle, WA | 206 784 8691 | Lamp Recycling |

August 1995

*The list does not constitute a recommendation, but is provided as a service to the public. The Department of Ecology does not make any representation or warranty that any permits or other governmental compliance requirements, if any, have been met by the businesses listed here. Compliance is the responsibility of each individual business. It is also prudent to call first.*

# 5.10 Asbestos

Because of serious health risks, building materials containing asbestos must be disposed of according to strict state and federal regulations. State hazardous waste regulations are not applicable to all types of asbestos handling and disposal if other more specific asbestos management regulations are followed. WAC 173-303-395(3) allows dangerous waste asbestos disposal to be conducted using federal regulations. Chapter 3, Air, Section 3.1 provides a thorough discussion of asbestos issues in the construction industry including special procedures for containing, hauling, disposing of and keeping records of asbestos waste.

## 5.10.1 Contacts and Sources of Information for Asbestos

- Department of Ecology (see Section 5.13 for contact information):

  The following publications are available:

  *Asbestos: Requirements for Reporting, Handling, and Disposal* (95-202)

  *What You Should Know About Asbestos Safety*
  (Non-Ecology publication; available through Publications Distribution Office or HQ-Air Quality Program)

# 5.11 Lead

Lead poisoning has become a serious national health concern because an estimated one in eleven children have high lead levels in their blood. Lead is a common component in construction and demolition debris. It is most often found in lead pipes, copper pipes with lead solder, and interior and exterior painted wood, siding, window frames and plaster.

Most buildings constructed before 1960 contain heavily leaded paint. Buildings constructed as late as 1978 also may contain lead-based paint. Lead pipe and solder can be found in all but the most recently constructed buildings. If not properly managed, building materials may leach lead into the environment. Heavily painted woodwork and sandblast media from paint removal may designate as hazardous waste.

Increasingly, consumers are suing contractors for lead contamination that occurs during demolition and renovation activities. You can protect yourself from lead contamination related lawsuits by becoming aware of the hazards of lead poisoning, appropriately managing lead containing demolition debris, (see Section 5.11.2) and by carefully examining your liability (see Appendix C, Contractor Liability.) Lead pipe or metal objects containing lead may be recycled as scrap metal without regulation if carefully managed.

## 5.11.1 Federal Regulations

| | |
|---|---|
| **Code of Federal Regulations** | |
| **29 CFR 1926.62** | Federal regulations on lead exposure for construction workers. |
| **24 CFR Part 35, 40 CFR Part 745** | Federal requirements for disclosure of known lead based paint and/or lead based paint hazards in housing. |
| **OSHA and L &I Regulations** | |

In June 1993, the federal OSHA developed new lead exposure standards for construction workers who handle materials containing lead. Effective December, 1993, L & I adopted an identical regulation. These regulations promote worker safety. They cover provisions such as safe work practices; worker exposure limits; labeling; employee training; protective clothing and respirators; medical surveillance; monitoring and record keeping; and other regulatory requirements.

### 5.11.2 Contacts and Sources of Assistance for Lead

For regulations and information on worker safety and handling of lead containing materials contact:

- L & I (see Appendix A for a list of L & I Workplace Consultation Services Field Offices)

The following guidance documents are available from L & I Field Offices:

*Lead in Construction Fact Sheets 1-6* (OSHA 93-47-93-52*)*

*Lead in Construction* (OSHA pamphlet 3142)

*Occupational Lead Exposure - An Employer Alert* (Publication # P413-050-000)

*A Lead Alert for Workers*

Note: At this time, L & I is also working on a lead in construction Question and Answer fact sheet. Contact the Field Offices for availability.

- EPA Region 10,
  1200 Sixth Avenue
  Seattle, WA 98101

The following documents are available:

*Lead Poisoning and Your Children*, US Environmental Protection Agency, February, 1995, EPA 800-B-92-002

*Protect Your Family From Lead in the Home*, US Environmental Protection Agency, May 1995, EPA 747-K-94-001

## 5.12 Chlorofluorocarbons

The Environmental Protection Agency regulates the recovery, recycling, reclamation and disposal of refrigerants using hydrochlorofluorocarbons (HCFCs) or chlorofluorocarbons (CFCs) as described in Section 608 of the 1990 Federal Clean Air Act (40 CFR Part 82.156). The state hazardous waste regulations address HCFCs and CFCs under WAC 173-303-120 (3)(c) and -506.

For more information, see Chapter 3, Air, Section 3.5, Chlorofluorocarbons.
Over 8 million refrigerators, freezers, air conditioners, dehumidifiers and other refrigerated appliances are discarded each year, releasing an estimated 4 million pounds of CFCs and HCFCs into the atmosphere. Such releases contribute to the destruction of the ozone layer.

EPA regulations prohibit individuals from knowingly venting ozone depleting compounds used as refrigerants into the atmosphere while maintaining, servicing, repairing, or disposing of air conditioning or refrigeration equipment.

Certified technicians using proper recovery/recycling equipment must ensure removal of refrigerants from any large appliance destined for disposal or demolition. Documentation of refrigerant removal must be maintained by the final disposal location (i.e., scrap metal recyclers, landfill owner, etc.)

If your construction activities involve dismantling/disposal of on-site refrigeration equipment (such as retail food refrigerators, cold storage warehouse refrigeration, chillers, air conditioning equipment), you should confirm that the refrigerant from the equipment is properly recovered by a trained servicing professional before your demolition activity begins. Smaller equipment, such as household refrigerators, room air conditioners, etc., can be taken (with the refrigeration charge intact) to an appropriate solid waste disposal facility. Under no circumstances should you disconnect hoses or in any way cause the release of these refrigerants into the atmosphere.

## 5.12.1 Contacts and Sources of Assistance for CFC's

- EPA Region 10
  Office of Air Quality
  1200 Sixth Avenue
  Mail Stop OAQ - 107
  Seattle, WA 98101
  206-553-0775

- Ecology Regional Offices (see Appendix A)

## 5.13 Contacts and Sources of Assistance for Hazardous Waste

For more information on planning requirements or a copy of the planning guide contact:

- Ecology Regional Offices (see Appendix A.1)

- Washington Department of Ecology
  Hazardous Waste and Toxics Reduction Program
  300 Desmond Drive
  P.O. Box 47600
  Olympia, WA 98504-7600
  360-407-6170 (Dangerous Waste Reporting Helpline)
  360-407-6700 (Program Receptionist)

*Pollution Prevention Planning Guidance Manual*, Publication #91-2 Revised, September 1993

For information about Ecology/EPA Identification Numbers, contact:

- Washington Department of Ecology
  Attn: DW Notifications
  P.O. Box 47658
  Olympia, WA 98504-7658
  360-407-6737

- Washington State Patrol
  Commercial Vehicle Division
  General Administration Building
  P.O. Box 42614
  Olympia, WA 98504-2614
  360-753-0350

- EPA Region 10
  US EPA
  1200 Sixth Avenue
  Seattle, WA 98101
  206-553-1200

- EPA Washington Operations Office
  300 Desmond Drive
  P.O. Box 40900
  Olympia, WA 98504-0900
  360-753-9437

- US Dept. of Transportation (Hazardous Material Transportation)
  501 Evergreen Plaza
  711 South Capitol Way
  Olympia, WA 98501
  360-753-9875

- Local Government Assistance (see Appendix A)

# Chapter 6
# Spills Reporting and Cleanup

This section applies to contractors who use oil, hazardous substances or paint that could be spilled or released into the environment.

A spill or release of oil, hazardous substances (including waste), or paint requires reporting under federal and state laws. In addition to reporting a spill or release, all spills and releases must be cleaned up immediately. Requirements for cleaning spills or releases vary with the material. You should become familiar with spill cleanup procedures for the materials you use in construction activities.

Ecology has a Small Spills Cleanup Guide. Please contact your regional Ecology office (see Appendix A) for a copy.

## 6.1 Federal and State Regulations

**Resource Conservation and Recovery Act (RCRA)** Federal statute regulating solid and hazardous waste

**Toxics Substance Control Act (TSCA)**

**Hazardous Material Transportation Act (HMTA)**

**Clean Water Act (CWA)**

**Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**

**Superfund Amendment Reauthorization Act (SARA) Title 3**

**Revised Code of Washington (RCW)**

| | |
|---|---|
| **Chapter 90.56** | Oil and Hazardous Substance Spill Prevention and Response |

**Washington Administrative Code (WAC)**

| | |
|---|---|
| **Chapter 173-340** | Model Toxics Control Act (MTCA) |
| **Chapter 173-303-145** | Dangerous Waste Regulations |
| **Chapter 296-62-300** | Hazardous Waste Operations and Emergency Response (HAZWOPER) |

## 6.2 Spill Reporting

A critical step in pollution prevention is recognizing when a problem exists and acting quickly. When a spill occurs, the proper authorities must be notified regardless of spill volume. Table 6.2 identifies contacts for various spill incidents.

**Table 6.2**
**Agencies To Notify During a Spill or Release**

| Type of Spill | Notify |
|---|---|
| Oil or hazardous substance spill | National Response Center<br>800-424-8802<br><br>Washington Division of Emergency Mgmt<br>800-258-5990 |
| Serious emergency such as an accident involving a hazardous material resulting in death, hospitalization, property damage in excess of $50,000. | National Response Center<br>800-424-8802<br><br>Department of Labor and Industries<br>(see Appendix A) |

## 6.3 Cleanup

Anyone responsible for the spill or release of oil or a hazardous substance (including waste) is required to immediately clean it up. Generally, all spill or release cleanup actions must employ methods that adequately remove recoverable product or substances. An Ecology "State On-Scene Coordinator" may give specific verbal or written directions regarding emergency cleanup actions. Larger or more complex hazardous substances spills will be referred to Ecology's Waste Management Division for cleanup. Cleanup must employ the best available methods to achieve the lowest practicable level of contamination as determined by Ecology.

Spill cleanup activities must conclude with the proper disposal of all materials related to the spill (see Chapter 4, Solid Waste, and Chapter 5, Hazardous Waste, for more information).

## 6.4 Worker Safety During Spill Cleanup

Employers need to develop a safety program which considers the range of potential spills and sets out appropriate emergency actions. The safety and health program must address protective measures for employees should an incidental spill occur that can be safely cleaned up by personnel on-site. Employees responsible for responding to a spill must receive hazard communication training. Cleanup of larger or more urgent spills may be considered as emergency response operations, triggering the more extensive requirements of WAC 296-62-03112. Employers who plan to evacuate their employees when an emergency occurs and who do not permit any of their employees to assist in handling the emergency are exempt from these requirements if they have an appropriate emergency action plan.

## 6.5 Contacts and Sources of Information

- Ecology Regional Offices (see Appendix A.1)
- See Table 6.2

# Chapter 7Noise

This chapter applies to contractors who generate excessive noise during construction or demolition.

Construction activities or equipment often contribute to noise pollution. Common examples include blasting, drilling, compressors, jack hammers, emergency warning back-up beepers and construction vehicle operation.

Excessive construction noise impacts the health, safety and welfare of citizens and workers and deteriorates the quality of life. Such actions as maintaining mufflers in good repair, enclosing equipment within sound-proofed enclosures and using portable noise barriers can greatly reduce noise pollution.

## 7.1 State Regulations

| | |
|---|---|
| **Revised Code of Washington (RCW)** | |
| **Chapter 70.107** | Noise Control |
| | |
| **Washington Administrative Code (WAC)** | |
| **Chapter 173-58** | Sound Level Measurement Procedures |
| **Chapter 173-60** | Maximum Environmental Noise Levels |
| **Chapter 173-62** | Motor Vehicle Noise Performance Standards. |

These regulations outline provisions and standards for maximum noise levels, motor vehicle noise, and sound level measurement. Some of the regulations apply to construction activities; in particular, these regulations specify the time, duration (work hours), and location of maximum permissible noise levels.

Construction activities are exempt from most of the provisions of these regulations, however, contractors do need to comply with local noise control ordinances (see Section 7.3 below).

Due to funding cutbacks, Ecology no longer has resources to assist with noise abatement and control inquires. However, the state's noise control regulations are still in effect and provide requirements and guidance to local government (cities and counties) for adoption and enforcement of community ordinances.

## 7.2 Local Regulations

Local noise regulations vary among communities. Some local jurisdictions follow state regulations. A city or county may have their own noise control ordinances or standards that may be more strict than state regulations. Local ordinances frequently use curfews to regulate construction noise.

## 7.3 Procedures

Before beginning construction, contact local authorities about applicable noise control ordinances. Table 7.1 lists counties in the state or any city within that county that have a stricter enforceable noise ordinance for construction activities than the state regulations. A contact phone number is provided for the counties or cities that have noise ordinances. Although very few communities have enforceable noise ordinances, if you have questions about the noise levels generated at your construction site you may contact the local sheriff. Keep in mind that the state laws do apply in jurisdictions without local ordinances. Also, be aware that noise restrictions may be a condition of your building permit.

**Table 7.1 Local Noise Control Programs as of January 1996**

| County | Local Ordinance | Contact |
|---|---|---|
| Island | YES | For compliance with building code ordinance call 360-679-7308<br>For complaints call 360-679-7350 |
| King | YES | Seattle-King County Health Department 206-296-4794. Anything beyond normal hours or exceeding current levels will require a variance. |
| Seattle | YES | Department of Construction & Land Use 206-233-7224 or 684-8420.<br>Enforces noise ordinance for permitted construction projects and permit conditions related to working hours and noise levels. |
| Kitsap | YES | Kitsap Co. Code Enforcement Office 360-895-4968 |
| Thurston | YES | Thurston County Permit Center 360-786-5490 |
| Snohomish | NO | As of 1/96 drafting new ordinance |
| Whatcom | YES | Zoning Office 360-676-6907 |

For more information, contact your local building department or code enforcement office.

## 7.4 Worker Protection

Excessive exposure to noise can cause hearing loss in employees. To prevent this, the Department of L & I requires the following Hearing Conservation Program elements, when employee noise exposure exceeds 85 dBA as an 8 hour time-weighted average:

- Exposure Monitoring
- Hearing Protection
- Baseline and Annual Audiometric Testing
- Employee Training

L & I has an explanatory booklet available: ***Hearing Conservation Guidelines***. To request a copy, or for more information contact the Field Offices of L & I listed in Appendix A.

## 7.5 Contacts and Sources of Assistance

The best source of assistance on noise control is your local building department or code enforcement agency.

Ecology provides a noise information packet about the state regulations. To receive a copy contact:

- Ecology Headquarters
  Hazardous Waste & Toxic Reduction Program
  PO Box 47600
  Olympia, WA 98504-7600
  360-407-6718

For information about noise standards for heat pumps and air conditioners, contact:

- Air Conditioning and Refrigeration Institute
  4301 N. Fairfax Drive
  Suite 425
  Arlington, VA 22203
  703-524-8800

# Appendix A
# Agency Contacts

## A.1 Washington State Department of Ecology: Addresses, phone numbers and 1-800 Numbers:

**Headquarters:**

**Ecology Headquarters Building**
300 Desmond Drive
P.O. Box 47600
Olympia, WA 98504-7600
(360) 407-6000

*Permit Assistance Center:*
(360) 407-7037

**Satellite Locations:**

**Kennewick Hanford Project Office (Nuclear Waste)**
1315 West 4th
Kennewick, WA 99335-6018
(509) 735-7581

**Nooksack**
1616 Cornwall
Bellingham, WA 98225-4633
(206) 738-6250

**Manchester Laboratory**
7411 Beach Drive East
Port Orchard, WA 98366-8204
(360) 871-8860

**Padilla Bay National Estuarine Research Reserve**
1043 Bayview-Edison Road
Mt. Vernon, WA 98273-9668
(360) 428-1558

**Clark County** (Thursdays only)
2000 Fort Vancouver Way
Vancouver, WA 98663
(360) 696-8085

**Regional Offices:**

**Central Regional Office**
15 West Yakima Avenue
Yakima, WA 98902-3401
(509) 575-2490
*Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima* counties

**Eastern Regional Office**
North 4601 Monroe Street
Spokane, WA 99205-1295
(509) 456-2926
*Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman* counties

**Northwest Regional Office**
3190 160th Avenue S.E.
Bellevue, WA 98008-5452
(206) 649-7000
*Island, King, Kitsap, San Juan, Snohomish, Skagit, and Whatcom* counties

**Southwest Regional Office**
300 Desmond Drive
P.O. Box 47775
Olympia, WA 98504-7775
(360) 407-6300
*Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, and Wahkiakum* counties

| Ecology 1-800 Numbers: | Purpose: |
|---|---|
| **Vehicle Emission General Information**<br>1-800-453-4951 | Non-technical information about Washington's emissions testing program. |
| **Automotive Technical Assistance**<br>1-800-453-4951 | Technical assistance/advice on motor vehicle emission inspections. |
| **Recycling Information**<br>1-800-732-9253 | Promotes waste reduction and recycling, household hazardous waste assistance. |
| **Hazardous Substance Information**<br>1-800-633-7585 | Community Right to Know for public and business. |
| **Hazardous Waste Cleanup and Underground Storage Tanks Information Hotline**<br>1-800-826-7716 | Site information, publications & technical assistance. |
| **Hanford Cleanup Hotline**<br>1-800-321-2008 | Public questions about operations, cleanup and compliance at Hanford Site. |
| **Water Quality Wastewater and Wastewater Operator Certificate Information**<br>1-800-633-6193 | Provides wastewater and water quality issue information. |
| **Woodsmoke Information Line**<br>1-800- 523-4636 | Supports Woodsmoke Control Program & education on health effects of smoke. |
| **Agricultural Air Information: Eastern Region**<br>1-800-406-5322 | Public information on agricultural burning. |
| **Agricultural Air Information: Central Region**<br>1-800-501-0114 | Public information on agricultural burning. |
| **Hanford Environmental Dose Reconstruction Project**<br>1-800-545-5581 | Public involvement. |
| **Dangerous Waste "Annual Report"**<br>1-800-874-2022 | Annual Dangerous Waste reporting assistance |

## A.2 Department of Labor and Industry's Workplace Consultation Services:

| **Field Locations** | **Phone Number** |
|---|---|
| Everett | 206 290-1300 |
| Mount Vernon | 360 428-1350 |
| Seattle | 206 281-5470 |
| Spokane | 509 324-2600 |
| Tacoma | 206 596-3800 |
| Tumwater | 360 902-5800 |
| Tukwila | 206 248-8240 |
| Vancouver | 360 896-2300 |
| Wenatchee | 509 663-9713 |
| Yakima | 509 454-3740 |

## A.3 Health Authorities

| County | Health Department | Phone Number |
|---|---|---|
| Adams | Adams County Env. Health District | 509-659-0090 |
| Asotin | Asotin County | 509-758-3344 |
| Benton | Benton-Franklin Health District | 509-546-2916 |
| Chelan | Chelan-Douglas Health District | 509-664-2624 |
| Clallam | Clallam County Community Development | 360-452-7831 |
| Clark | Southwest Washington Health District | 360-696-8428 |
| Columbia | Columbia County Health District | 509-382-3048 |
| Cowlitz | Cowlitz-Wahkiakum Health District | 360-577-0289 |
| Ferry | Northeast Tri-County Health District | 509-684-2262 |
| Garfield | Garfield County Health District | 509-843-3412 |
| Grant | Grant County Health District | 509-754-2011 |
| Grays Harbor | Grays Harbor Human Services | 360-249-4413 |
| Island | Island County Health Department | 360-679-7350 |
| Jefferson | Jefferson County Health Department | 360-385-9444 |
| King | Seattle-King County Health District | 206-296-4785 |
| Kitsap | Bremerton-Kitsap Health District | 206-478-5298 |
| Kittitas | Kittitas County Health District | 509-962-7698 |
| Klickitat | Southwest Washington Health District | 360-696-8428 |
| Lewis | Lewis County Public Services | 360-740-1277 |
| Lincoln | Lincoln County Health Department | 509-725-2501 |
| Mason | Mason County Health Department | 360-427-9670 |
| Okanogan | Okanogan County Health District | 509-422-7140 |
| Pacific | Pacific County Health Department | 360-875-9356 |
| Pierce | Tacoma-Pierce County Health Department | 206-591-6538 |
| San Juan | San Juan Health District | 360-378-4474 |
| Skagit | Skagit County Health District | 360-336-9380 |
| Snohomish | Snohomish County Health District | 206-339-5250 |
| Spokane | Spokane County Health District | 509-324-1590 |
| Thurston | Thurston County Public Health & Social Serv. | 360-786-5456 |
| Walla Walla | Walla Walla County-City Health Department | 509-527-3290 |
| Whatcom | Whatcom County Health Department | 360-676-6724 |
| Whitman | Whitman County Health Department | 509-397-6280 |
| Yakima | Yakima County Health District | 509-575-4040 |

# A.4 Local Moderate Risk Waste Coordinators

| County | Department | Phone Number |
|---|---|---|
| Adams | Adams County Public Works | 509-659-4236 |
| Adams | Waste Reduction & Recycling | 509-488-0529 |
| Asotin | Asotin County Health Department | 509-758-3344 |
| Benton | Benton County | 509-786-5611 |
| Benton | City of Richland Waste Utility | 509-943-7387 |
| Chelan | Chelan/Douglas Health Solid Waste | 509-664-2624 |
| Chelan | Chelan County Public Works | 509-664-5415 |
| Clallam | Clallam County Environmental Health | 360-417-2415 |
| Clark | Clark County Public Works | 360-699-2375 |
| Clark | SW Washington Health District | 360-696-8208 |
| Columbia | Columbia County Public Works | 509-382-2534 |
| Cowlitz | Cowlitz Public Works | 360-577-3125 |
| Douglas | Douglas County Public Works | 509-886-0899 |
| Ferry | Ferry County Public Works | 509-775-5217 |
| Franklin | Franklin County Public Works | 509-545-3514 |
| Garfield | Garfield County Public Works | 509-843-1301 |
| Grant | Grant County Public Works | 509-754-2011 |
| Grays Harbor | Grays Harbor Public Utility | 360-249-4222 |
| Island | Island County Solid Waste Department | 360-678-5111 |
| Jefferson | Jefferson County Public Works | 360-379-6911 |
| King | Seattle/King County Environmental Health Div | 206-296-3968 |
| Kitsap | Kitsap County Public Works | 360-895-3931 |
| Kitsap | Bremerton Kitsap Health District | 360-692-3611 |
| Kittitas | Kittitas County Solid Waste Division | 509-962-7698 |
| Klickitat | Klickitat County Public Works | 509-773-2495 |
| Lewis | Lewis County Public Services Building | 360-740-1221 |
| Lewis | Lewis County Environmental Health | 360-740-1233 |
| Lincoln | Lincoln County Health Department | 509-725-2501 |
| Mason | DCD Utilities Division | 360-427-9670 |
| Okanogan | Department of Public Works | 509-422-7308 |
| Pacific | Health and Human Services Department | 206-875-9652 |
| Pend Oreille | Pend Oreille Public Works | 509-447-4513 |
| Pierce | Tacoma Pierce County Health Department | 206-591-6528 |
| San Juan | San Juan County Public Works | 360-378-3421 |
| Skagit | Skagit County Public Works | 360-424-9532 |
| Skagit | Skagit County Health Department | 360-336-9380 |
| Skamania | Skamania County Public Works | 509-427-5141 |
| Snohomish | Snohomish County Solid Waste Division | 206-388-6473 |
| Snohomish | Snohomish County Health District | 206-339-5250 |
| Spokane | City of Spokane | 509-625-7898 |
| Stevens | Stevens County Landfill | 509-738-6106 |
| Thurston | Thurston County Environmental Health | 360-754-4663 |
| Wahkiakum | Wahkiakum County Public Works | 360-795-3301 |
| Walla Walla | Walla Walla Regional Plng | 509-527-3282 |
| Walla Walla | Walla Walla Landfill | 509-527-3746 |
| Whatcom | Whatcom County Health Department | 360-676-6724 |
| Whitman | Whitman County Public Works | 509-397-4622 |
| Yakima | Yakima County Public Works | 509-574-2450 |
| Yakima | Yakima Health District | 509-575-4040 |

# Appendix BEmployee Safety & Health

As a contractor, you have certain obligations to protect the safety and health of employees and subcontractors. There are several federal and state laws and regulations that apply to occupational safety and health hazards. In Washington, these regulations are administered by the Department of Labor & Industries, Division of Consultation & Compliance (commonly referred to as WISHA or Washington Industrial Safety and Health Act). Failure to comply with regulations could result in civil or criminal penalties. To ensure compliance with employee health and safety standards, contact the Department of Labor and Industries office nearest you (see Appendix A).

The Department of Labor & Industries (L & I) offers the following resources for employer assistance through Consultation and Education Programs:

- Publications
- No-fee educational workshops
- Film library
- On-site communication

There is no charge for these services. Employers requesting on-site consultation must agree in advance to correct all serious hazards found.

## B.1 Safety & Health

All construction employers in Washington are required to have an active safety and health program, including weekly safety meetings and a written safety and health policy. The following is a basic list of topics for inclusion in the accident prevention program:

- Personal protective equipment
- Electrical
- Trenching and excavation
- Guard rails and fall protection
- Machine guarding
- Ladder and lift safety
- First Aid and CPR
- Confined space entry
- Material handling

For more information on accident prevention programs, request a copy of "Your Guide to an Accident Prevention Program Written Plan" from L & I. The Department

of Labor & Industries also offers free educational workshops to assist employers. Copies of the Workshop Catalog may be requested from L & I offices.

## B.2 Chemical Hazard Communication (Right to Know)

Numerous hazardous chemicals are used or generated at construction sites. Safety and Health standards require employers to give employees information on hazardous materials used or stored in the workplace. The employer must have a written program covering the methods it will use to assure the following:

- Labeling of containers, including chemical identity, hazard warnings, and manufacturer's name and address.
- An inventory list of all hazardous chemicals on site and ready access to Material Safety Data Sheets for each chemical.
- Employee training on tasks or situations that may involve exposure, how employees can recognize exposure, safe methods of doing work, and details of the employers hazard communication program.

Copies of the booklet "Understanding Right to Know" are available from the L & I offices (see Appendix A). This booklet gives step by step instructions for compliance with the Hazard Communication Standard, checklists, and answers to commonly asked questions. L & I also offers free educational workshops to assist employers. Copies of the Workshop Catalog may be requested from L & I offices (see Field Offices List in Appendix A).

## B.3 Other Issues

Construction is a complex industry in which many types of safety and health hazards can be encountered beyond those listed above. Situations change and conditions could be different on a day-to-day basis. It is the responsibility of the employer to routinely review the work conditions and to identify potential hazards through a self inspection program.

## B.4 Applicable Standards & Access to Copies

Workplace safety & health requirements applicable to the construction industry will be found primarily in the following standards:

- WAC 296-155 Safety Standards for Construction Work
- WAC 296-24 General Safety and Health Standards
- WAC 296-62 General Occupational Health Standards

The following specialty standards may also apply in some situations

- WAC 296-32 Telecommunications Workers
- WAC 296-36 Compressed Air Work
- WAC 296-37 Commercial Diving Operations
- WAC 296-44 Electrical Construction Code
- WAC 296-52 Possession, Handling, and Use of Explosives
- WAC 296-65 Asbestos Removal and Encapsulation
- WAC 296-67 Management of Highly Hazardous Chemicals (Process Safety Management)

Copies of all standards are available free from L & I offices. Information on updated mailing lists is included with each copy.

## B.5 Department of Labor & Industries Educational Workshops

The following no-fee educational workshops are offered on a repeating basis at locations throughout the state. For schedules and more information request a copy of the Workshop Catalog from L & I offices nearest you.

- Accident Investigation
- Accident Prevention Programs
- Confined Space
- Controlling Your Claims Costs
- Excavation and Trenching
- Fall Protection
- Chemical Hazard Communication
- Hazardous Waste Operations & Emergency Response
- Injury & Illness Recordkeeping
- Introduction to Ergonomics and the New Voluntary Ergonomics Guidelines
- Job Analysis
- Lead in Construction
- Lockout / Tagout

- Making Sense of Your Premium Dollar
- New Employer Orientation
- Residential Construction Safety

## B.6 Publications Available from Department of Labor & Industries

The following publications are available free from L & I offices (see Appendix A.2):

*Safety & Health Posters and Publications Catalog* (F417-161-000)

*Hazardous Chemicals Your Right to Know* (F413-014-000)

*Understanding Right To Know* (F413-012-000)

*Worker and Community Right to Know* (F417-169-000)

*Accident Prevention Handbook* (F417-045-000)

*Workplace Guidelines for VDTs* (F413-054-000)

*A Guide to WISHA* (P418-028-000)

*Eye Protection in the Workplace* (F417-072-000)

*Free State Safety & Health Assistance* (F417-186-000)

*Safety & Health Films/Videos Catalog* (F417-061-000)

*Hearing Conservation Guidelines* (F413-001-000)

*Your Guide to an Accident Prevention Program Written Plan* (F417-101-000)

*Cumulative Trauma Disorders and Your Job* (F413-024-000)

*Hazard Communication and Agriculture* (F413-022-000)

*Workplace Hazards to Reproductive Health - Providers and Employers* (F413-035-000)

*Workplace Hazards to Reproductive Health -- Workers* (F413-036-000)

*Fitting the Job to the Worker - An Ergonomics Program Guideline* (F417-110-000)

# Appendix C Contractor Responsibility and Liability

Contractors are becoming increasingly aware that environmental protection makes good sense and good business as well. Contractors can face scrutiny from regulators and neighbors through civil damage or criminal court proceedings. Knowledge of the required permits and some preventative measures can save expensive legal fees and construction delays. A few preventative measures can go a long way to avoiding environmental incidents and their related liability.

The financial burden resulting from environmental liability can be considerable. It is becoming common for government agencies to enforce regulations by assessing civil penalties against violators. These can exceed thousands of dollars per day per violation. In some cases criminal penalties may also apply. Contractors found responsible for contamination can be ordered to conduct cleanup activities or to reimburse the government agency or private party that implements a cleanup. Depending on the extent of damage, contractors may also be subject to lawsuits from private parties who feel they have been wronged.

You can significantly reduce your liability by taking action to learn about environmental impacts of your projects. It is important to understand that you do not have to be negligent to be responsible for environmental damage. Contractors can be liable whether or not they are at fault. You can be held liable even if you are unaware that your actions caused environmental contamination.

There are four ways to avoid problems:

- Become aware of environmental requirements, such as those outlined in this handbook;
- Train your employees and your subcontractors and ensure that this knowledge is carried through on the jobsite;
- Pay careful attention to the wording of construction contracts; and
- Make sure you have adequate insurance coverage.

# C.1 Contractual Issues

Whether you are a general contractor, construction manager, subcontractor or specialty contractor, the written contract you sign will have a significant, though not exclusive, impact on both your environmental responsibilities and the extent of your liability.

When you enter into a construction contract, it is important to understand how responsibilities, risks and costs are allocated between the owner and all others involved in the project. Properly addressing liability within the contractual relationship can reduce your exposure to third-party claims. However, not all risk can be addressed in a construction contract. And you can not "contract away" the right of the government to pursue any person who violates the law.

Below are some issues to consider when entering into a construction contract. The following discussion should be viewed as a brief overview, not as a comprehensive discussion of contractual protection. For more guidance, consult with your attorney.

Remember, each contract is a separate business arrangement. There is no standard contract language adequate to address all the environmental issues you may face as you move from job to job. Be alert, familiarize yourself with environmental requirements, and when in doubt, seek legal counsel.

## C.1.1 Compliance with Environmental Regulations

Compliance with environmental regulations helps protect you from liability and financial hardship. You can control your own actions. Your contracts with subcontractors should address their actions and compliance. All subcontractors should be required to:

- Strictly comply with all government requirements.
- Protect the site and monitor activities so as to prevent a third party from creating a hazardous incident or causing environmental contamination.
- Identify hazardous materials used or stored at the project site and ensure proper labeling, storing, handling and disposal.

## C.1.2 Known or Suspected Hazardous Substances

Some environmental contaminants, such as asbestos, were prevalent in construction materials such as floor tile, insulation and shingles prior to the 1980s. As mentioned in Chapter 3, Air, Section 3.1, materials that are likely to contain asbestos should be tested before handling. If the material is not tested, the law requires contractors to proceed as if the material contains asbestos.

Your contract should address the need to test for known or suspected environmental contaminants. It should specify who is responsible for hiring a qualified person to conduct such tests.

Federal and state environmental regulations require proper management of hazardous wastes generated on your sites. The owner/operator of the property is ultimately responsible for their management, removal and if transferred off-site, insurance that they arrive at their final destination.

### C.1.3 Unexpected Site Conditions or Hazardous Substances

Every contract should provide for the discovery of both unexpected hazardous materials and unanticipated situations encountered during construction. As much as possible, your contract should clarify your responsibilities and obligations for unexpected site conditions.

The contract should require the site owner to provide you with the best available information about the site and materials located on the site. The owner's disclaimer of liability clause should be modified to state that the contractor has no responsibility for existing site condition, including underground storage tanks or materials located at the site such as toxic, hazardous or other dangerous substances unless those materials are brought on the site by the contractor. If you encounter an unknown hazardous substance or condition, immediately notify the owner. It is wise to have the contract require the owner to hire a qualified person to determine if the substance is hazardous or regulated. In the interim, you should follow the guidelines in this document and contact the agencies listed to prevent environmental degradation.

If you must absorb the risk of unexpected conditions on the site, negotiate a provision that allows you access to the site and time to evaluate that risk before beginning construction. The contract should give you the option to terminate the contract if conditions are not satisfactory. It is advisable to provide a contract allowance for appropriate inspections and testing for hazardous conditions.

## C.2 Insurance Coverage

Every effort should first be made to prevent environmental incidents from occurring. Nevertheless, an uninsured environmental incident can bankrupt a responsible party. Because of the financial risk involved, it makes business sense to obtain pollution liability insurance.

Insurance usually comes in one of two forms: endorsement to an existing liability policy or under a separately issued policy. Because pollution liability insurance is extremely complicated, contractors should consult with qualified insurance professionals to obtain the coverage they need. In addition, your attorney should review the proposed policy to determine exactly what the insurance covers.

## C.3 Contacts and Sources of Assistance

For more information, contact:

- Appropriate legal counsel
- Insurance representatives
- Associated General Contractors (AGC) provides information and seminars on contractor liability for their members. Call the local chapter for more information:

| | |
|---|---|
| **AGC of Washington** | 206-284-0061 |
| **Inland Northwest Chapter of AGC** | 509-535-0391 |
| **Oregon Columbia Chapter of AGC** | 503-682-3363 |

Information for this Appendix was originally developed with assistance from the Oregon-Columbia Chapter, Associated General Contractors Environmental Affairs Hazardous Waste Task Force.

# Appendix D
# Consumer Issues

Contractors often encounter environmental issues that do not fall under federal or state regulations but are still important to consumers. Most of these issues relate to indoor air quality and other material selection issues. Consumers are increasingly concerned about how construction activities and materials impact the health and comfort of building occupants. This chapter introduces two of these issues: radon and volatile organic compounds; and offers sources of additional information.

## D.1 Radon

Radon is an indoor air pollutant that has received a great deal of public attention. This naturally occurring radioactive gas is the second leading cause of lung cancer in the United States. Radon levels in Western Washington typically are low, although there are some areas and buildings where radon levels can be high. Eastern Washington, especially the Spokane area, has a high or very high potential for elevated radon levels indoors. Residents in these areas should test for radon.

In the past, radon problems often were associated with energy-efficient buildings that had few air leaks. However, most energy-efficient buildings now have built-in mechanisms for ventilation. Radon has also been an issue in older, "leaky" buildings.

Geographic location and the underlying soil and rock conditions are stronger indicators of a potential radon problem. Also, the type of construction can be a factor in determining whether your home has a potential for a radon problem. For instance, a home constructed "slab on grade" may present a higher potential risk than a home with a crawl space, and the type of ventilation in a house affects the risk determination.

## D.1.1 Contacts and Sources of Assistance for Radon

- EPA, Region 10
  U.S. EPA
  1200 Sixth Avenue
  Seattle, WA 98101
  800-424-4EPA
  206-553-4973

The following publications are available from EPA:

*Consumers Guide to Radon Reduction,* August 1992 *A Citizen's Guide to Radon,* Environmental Protection Agency, U.S. Department of Health and Human Services and U.S. Public Health Service, May 1992

*Sub-Slab Depressurization for Low-Permeability Fill Material: Design and Installation of a Home Radon Reduction System,* July 1991

- Washington Department of Health
  Division of Radiation Protection
  Environmental Radiation Section
  Mail Stop 7827 Airdustrial Center, Building 5
  P.O. Box 47827
  Olympia, WA 98504-7827
  360-753-3349

The following publications are available from the Washington Department of Health:

*Special Report: Radon in Washington, 1994*

*Radon and Your Health*

- Local Health Departments (see Appendix A.3)

- American Lung Association of Washington
  2625 Third Avenue
  Seattle, WA 98121
  800-LUNG-USA
  206-441-5100
  *brochure: facts about...Radon: The Health Risk Indoors*

# D.2 Volatile Organic Compounds in Construction Materials

Many consumers are concerned about pollution from volatile organic compounds used in construction materials. Several less irritating and less toxic building products have become available. Some examples include:

- Wood products that are free of formaldehyde.
- Low toxicity paint that is free of biocides or fungicides.
- Water-based, low toxicity finishes for wood and other surfaces.
- Non-toxic sealants used for air leakage control.
- Carpets and pads that do not outgas harmful vapors.

## D.2.1 Contacts and Sources of Assistance for Volatile Organic Compounds

For information on these and other building products and related health concerns, call:

- Washington Department of Health
  Office of Toxic Substances
  Airdustrial Center, Building #4
  P.O. Box 47825
  Olympia, WA 98504-7825
  360-664-8860

The following publications are available from the Department of Health:

*Formaldehyde Fact Sheet*

- The League of Women Voters of Seattle
  206-329-4848
  *Cleaning Up Home Toxics: Air and Dust.* Cost is $1.00 plus postage and handling.

## D.3 Contacts and Sources of Assistance

For more information on indoor air quality, contact:

- Environmental Protection Agency
  Region 10 Public Information Center, SO-143
  1200 Sixth Avenue
  Seattle, WA 98101
  800-424-4EPA
  206-553-4973

- Environmental Protection Agency
  IAQ INFO
  P. O. Box 37133
  Washington, D.C. 20013-7133
  1-800-438-4318

The following publications are available from the Environmental Protection Agency:

*Targeting Indoor Air Pollution*: *EPA's Approach and Progress* (IAQ-0029)

*Fact Sheet: Ventilation and Air Quality in Offices* (IAQ-0003)

*Fact Sheet: Sick Building Syndrome* (IAQ-0004)

*Fact Sheet: Report to Congress on IAQ* (Summary of Report) (IAQ-0006)

*Fact Sheet: Residential Air Cleaners* (IAQ-0007)

*Fact Sheet: Use and Care of Home Humidifiers* (IAQ-0008)

*Fact Sheet: Carpet and Indoor Air Quality* (IAQ-0040)

*Fact Sheet: Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders* (IAQ-0046)

*The Inside Story: A Guide to Indoor Air Quality* (IAQ-0009)

*Residential Air Cleaning Devices: A Summary of Available Information* (IAQ-0010)

*Current Federal Indoor Air Quality Activities* (IAQ-0011)

*Directory of State Indoor Air Contacts* (IAQ-0012)

*What You Should Know About Combustion Appliances and Indoor Air Pollution* (IAQ-0015)

*Asbestos in Your Home* (IAQ-0023)

*IAQ in Public Buildings: Volume I Project Summary* (IAQ-0020)

*IAQ in Public Buildings: Volume II Project Summary* (IAQ-0021)

*Compendium of Methods for the Determination of Air Pollutants in Indoor Air - Project Summary* (IAQ-0022)

- US Government Printing Office (GPO)
  Superintendent of Documents
  Washington, D.C. 20402-3238

The following publication is available from the U.S. Government Printing Office:

*Building Air Quality: A Guide for Building Owners and Facility Managers*
(Stock # 055-000-00390-4 Cost $24.00)

For more information on indoor air quality, contact:

- National Environmental Health Association
  720 Colorado Blvd.
  #970 South Tower
  Denver, CO 80222
  303-756-9090

The following publications are available from the National Environmental Health Association:

*Introduction to Indoor Air Quality: A Reference Manual*

*Introduction to Indoor Air Quality: A Self-Paced Learning Manual*
(cost for the set is $40 for members and $47 for non-members)

- Washington Department of Health
  Office of Toxic Substances
  Airdustrial Center, Building #4
  P.O. Box 47825
  Olympia, WA 98504-7825
  360-664-8860

The following publications are available from the Department of Health:

*General Indoor Air Quality Fact Sheet*

*Carbon Monoxide Fact Sheet*

*Best Management Practices for Indoor Air Quality in Schools*

- American Lung Association of Washington

2625 Third Avenue
Seattle, WA 98121
800-LUNG-USA
206-441-5100

*Indoor Air Resource Guide for Washington State*- a comprehensive state-wide directory and resource guide for a variety of indoor air quality problems.

*Indoor Air Pollution Fact Sheet - Formaldehyde*

*Indoor Air Pollution Fact Sheet - Asbestos*

*Indoor Air Pollution Fact Sheet - Carpet*

*Indoor Air Pollution Fact Sheet - Biological Agents*

*Indoor Air Pollution Fact Sheet - Combustion Pollutants*

*Home Indoor Air Quality Checklist*

*Indoor Air Pollution in the Office*

*Air Pollution in Your Home?*

*Office Indoor Air Quality Checklist*

*Combustion Appliances and Indoor Air Pollution*

The American Lung Association of Washington also distributes the following brochures:

*Asbestos! In my House?*, Puget Sound Air Pollution Control Agency

*The Indoor Air Quality Information Clearinghouse*, EPA

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